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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XIII.

CHICAGO, ILLINOIS, DECEMBER 15, 1894.

No. 6.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,
EXCELSIOR "Combined Grain Machine."

ALSO

PEASE DUSTLESS SEPARATORS and WAREHOUSE FANNING MILLS,
POWER CAR PULLERS, GASOLINE ENGINES, STEAM ENGINES, HORSE POWERS,
POWER TRANSMISSION MACHINERY,
GENERAL MILL AND ELEVATOR SUPPLIES.

E. H. PEASE MFG. CO., RACINE, WISCONSIN.

Headquarters for
SHAFTING, HANGERS, PULLEYS,
GEARS, SPROCKET WHEELS,
"Sweep" and "Tread" Horse Powers,
Elevator "Boots," "Heads," "Buckets,"
FEED GRINDERS,
Special Flax Mills; Single, Double and
Quadruple Flax Reels.
..... BELTING
"Platform," "Hopper" and "Dump"
Scales, Flexible Loading Spouts,
Corn Shellers, all kinds of FITTINGS,
SUPPLIES and MACHINERY for
Elevators and Mills.
Elevator Equipments a Specialty.

ADDRESS

GALDWELL
CONVEYOR
HORSE POWERS
WIRE ROPE
BELT TIGHTENERS

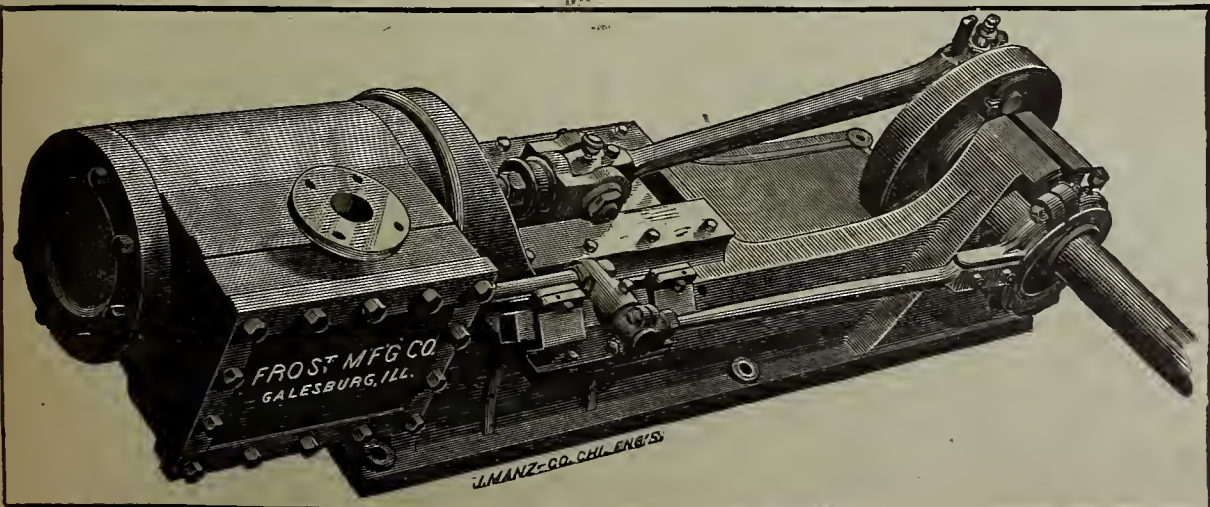
MILL AND ELEVATOR MACHINERY
ELEVATOR BOOTS
ELEVATOR BUCKETS
ELEVATOR BOLTS
BELTING AND ROPE TRANSMISSION
SHEAVE WHEELS
SHAFTING, HANGERS
SPROCKET WHEELS



SEND FOR CATALOGUE

**THORNBURGH
MFG. CO.**

110 Jefferson Street
CHICAGO, ILL.



FOR PRICES AND DISCOUNTS
— ON —

**Elevator Machinery
AND SUPPLIES**

— OF —
EVERY DESCRIPTION,

ADDRESS EITHER STEAM OR HORSE-POWER,

**The FROST MFG. CO.,
GALESBURG, ILL.**

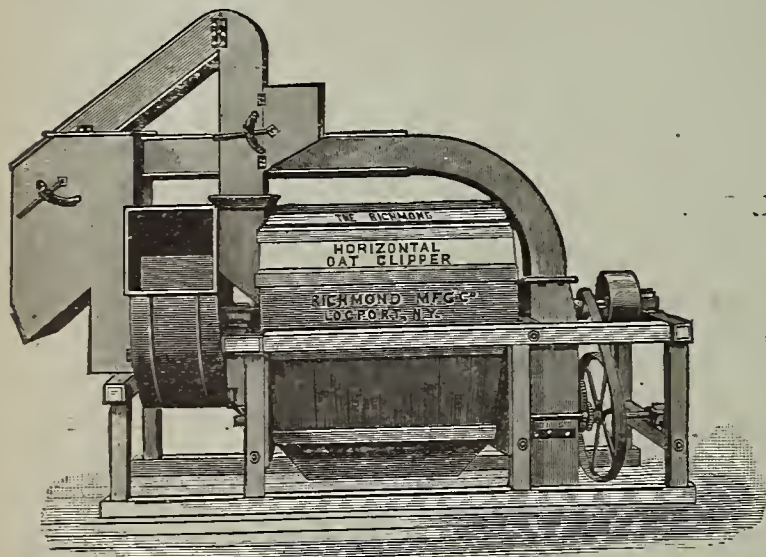
NOTICE.

Important Decision Affecting Elevator Owners and Builders.

The Hon. Judge Grosscup of the Circuit Court of the United States for the Northern District of Illinois, on May 9, 1894, sustained the validity of the dust collector patents known as the "CYCLONE," and ordered a permanent writ of injunction against the defendants.

Infringing machines involved in these suits were built by the Vortex Dust Collector Co. of Milwaukee, and the Huyett & Smith Mfg. Co. of Detroit, Mich., who themselves assumed and conducted the defense, through their own attorneys. IF YOU HAVE USED, OR ARE USING INFRINGING MACHINES, YOU CAN SAVE MONEY BY PROCURING A LICENSE AT ONCE AND THUS AVOID LAW SUITS. We must and will call a halt on pirates and users of piratical machinery, and we warn the trade thus frankly and publicly against the manufacture, sale or use of infringing machines, and it will be our duty to prosecute such infringements of our rights to the fullest degree and in the promptest manner.

The Knickerbocker Co., - Jackson, Mich.



The Richmond Horizontal Adjustable Oat Clipper with Revolving Case.

A Wonderful Machine.

WEST JEFFERSON STEAM FLOURING MILLS,

WEST JEFFERSON, OHIO, April 11, 1894.

RICHMOND MFG. CO., Lockport, N. Y.

GENTLEMEN:—Inclosed find check, covering bill of March 10, in full. The No. 0 Horizontal Adjustable Scourer and Polisher with Revolving Scouring Case is a wonderful machine, and we are more than pleased with its work. We have cleaned all kinds of wheat and must say that it cleans beyond our expectations.

Yours very truly, JOHN RENNER.

The Richmond Grain Cleaning Machinery and Dusters.

RICHMOND MANUFACTURING CO.,

Write for Catalogue.

LOCKPORT, N. Y., U. S. A.

Link-Belt Machinery Co.,

ENGINEERS, FOUNDERS MACHINISTS,
CHICAGO, ILL., U. S. A.



MANUFACTURE

Shafting, Shaft Bearings, Pulleys, Gearing,
Friction Clutches, Etc.
Manilla Rope Power Transmissions.
Standard Water Tube Safety Boilers.
Original Ewart Detachable Link Belting.
The Clark Power Grain Shovel.
Belt Conveyors and Trippers.
Savage & Love Patent Controllable Wagon
Dump.

NEBRASKA CITY, NEB., May 16, 1894.

CHICAGO AUTOMATIC SCALE CO., CHICAGO, ILL.:

Gentlemen:—Please ship to our address at Hamburg, Iowa, an Automatic Scale, same as we ordered of you some time ago. This Scale is doing good work and we want another for our mill at Hamburg. Send the invoice and notice of shipment to us here. Execute the order as promptly as possible.

Yours truly,

THEO. BEYSCHLAG, Mgr.



Porter Iron Roofing and Corrugating Co.,

19 Race Street, CINCINNATI, OHIO.

Manufacturers of all kinds of IRON and STEEL ROOFING and SIDING.

The Pioneers of the Metal Roofing Business in the United States. We guarantee satisfaction. We ship promptly. Give us a trial order, and we will sell you more.

When writing for our prices and Illustrated Catalogue, please mention the ELEVATOR AND GRAIN TRADE.

GRAIN ELEVATOR MACHINERY AND SUPPLIES

OUR SPECIALTY

Is to Furnish Every Description of

MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

GRAIN ELEVATORS

Such as:

"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.
SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE SPOUTS.
LEATHER, RUBBER, COTTON AND LINK BELTING.
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS.
"PLATFORM," "DUMP" AND "HOPPER" SCALES.
GRAIN SCOOPS, AND POWER GRAIN SHOVELS.

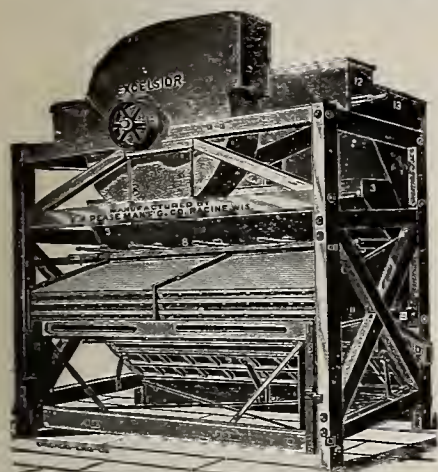
—ALL SIZES OF—

FARM AND WAREHOUSE FANNING MILLS.

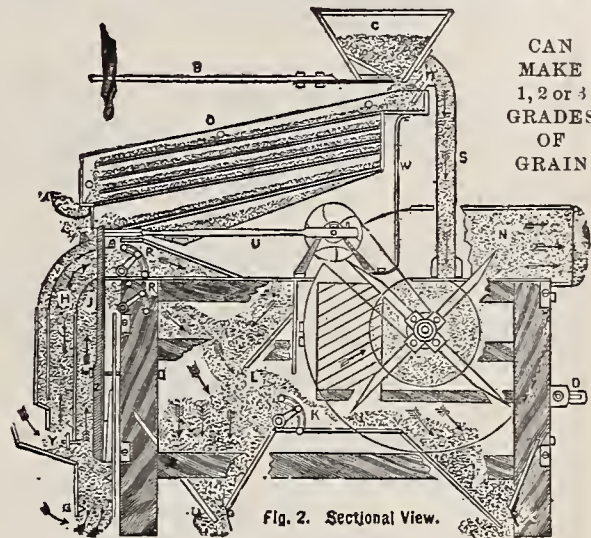
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,

Power Car Pullers, Oat Clippers, Dustless Receiving Separators,

POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



EXCELSIOR DUSTLESS ELEVATOR SEPARATOR,
Cleans, Separates and Grades Perfectly.
HAS NO SUPERIOR IN THE WORLD.

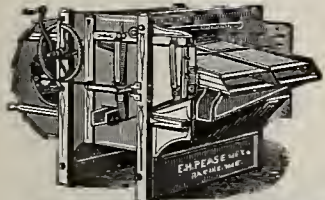


CAN
MAKE
1, 2 or 3
GRADES
OF
GRAIN

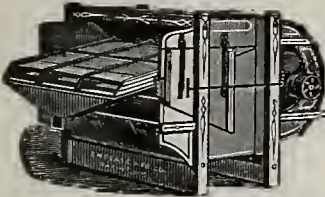
Fig. 2. Sectional View.

EXCELSIOR SEPARATOR AND GRADER.

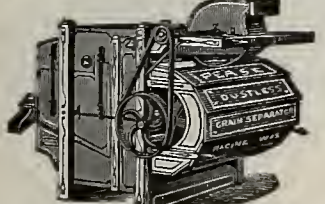
The Finest Wheat or Barley Machine on Earth



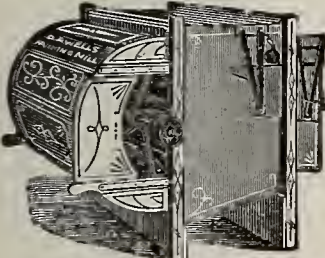
Pease Side-Shake Mill for Warehouses.



Pease End Shake Mill for Warehouses.

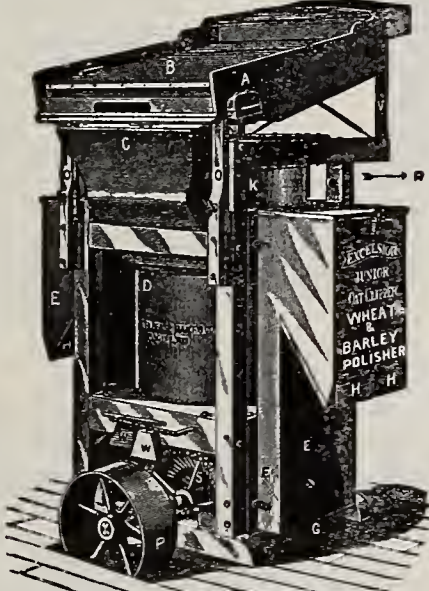


Pease Dustless Separator for Warehouses and Mills.



"Wells" Warehouse Mill.—Extra Large Capacity.

IT WILL PAY
YOU
TO GET OUR
CATALOGUES
PRICES
AND PROOFS OF
SUPERIORITY
BEFORE BUYING
ELSEWHERE.



EXCELSIOR JUNIOR

Oat Clipper, and Wheat and Barley Polisher, is the Simplest, Most Compact, LIGHTEST Running, Quickest Adjustable Machine of its kind made

PEASE
SPECIAL
FLAX MILLS
ARE
SUPERIOR
TO ALL OTHERS.



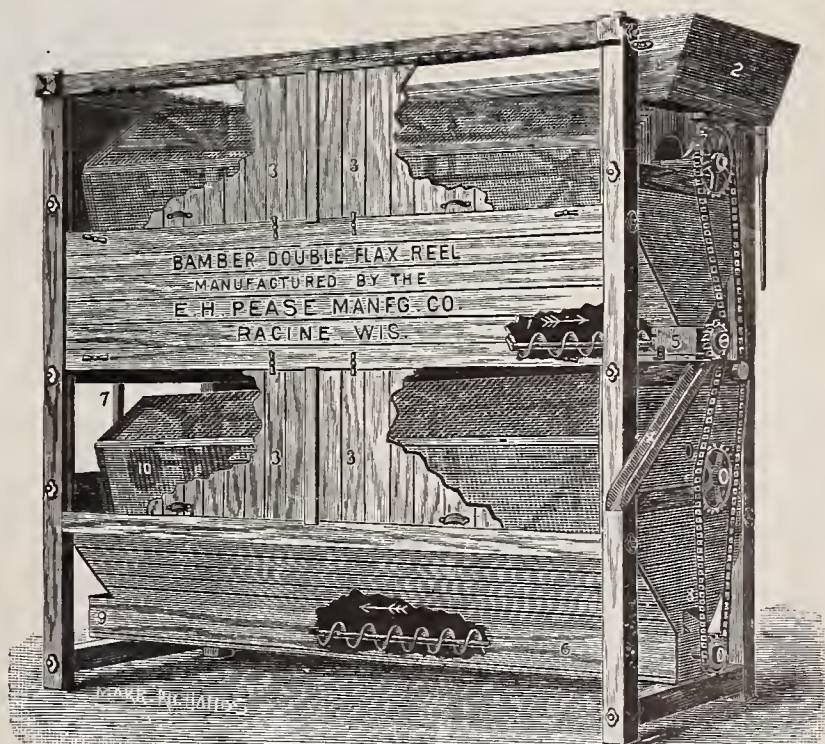
SAFEST,
MOST DURABLE
—AND—
POWERFUL PULLER
KNOWN.

HANDLES 1 to 20
Loaded Cars at once
on STRAIGHT and
LEVEL TRACK
and pro-rata on
GRADES and
CURVES

"HERCULES" POWER CAR PULLER.

OUR FLAX REELS

Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made



Made with 1, 2 or 4 Reels in one Chest, and with or without
Scalping Shoe."

Reels of any desired style or dimensions made to order.

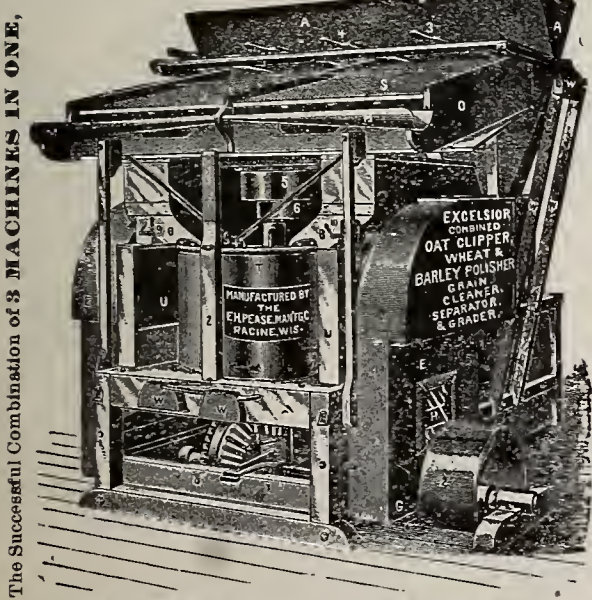
WE FULLY WARRANT
THE
SUPERIORITY
OF THE
MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities
OF ALL OUR
MACHINERY.

ADDRESS

—ALL—

LETTERS CAREFULLY

—TO—



EXCELSIOR COMBINED

Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

BRANCH OFFICE, No. 6 CORN EXCHANGE, MINNEAPOLIS, MINN.

FAMOUS HAND OR POWER CLEANERS COUNTRY ELEVATORS.

The Successful Combination of 3 MACHINES IN ONE.

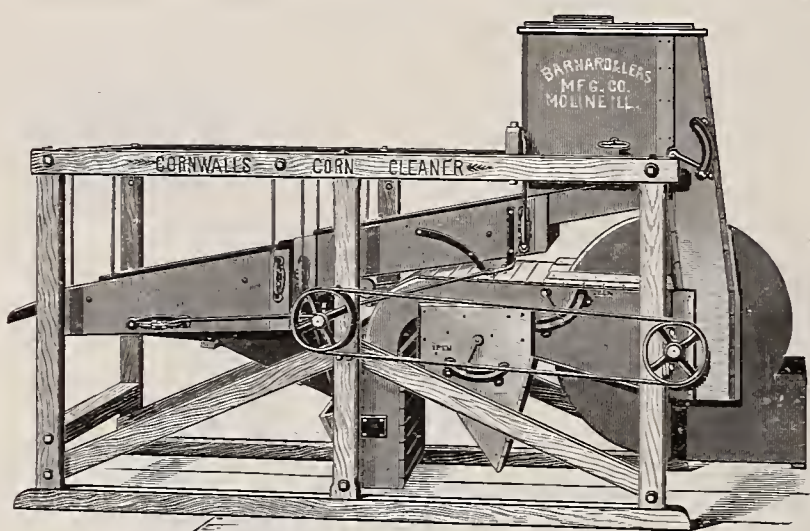
BARNARD & LEAS MANUFACTURING CO., MOLINE, ILLINOIS.

Sole Manufacturers of Barnard's Grain Cleaning Machinery.

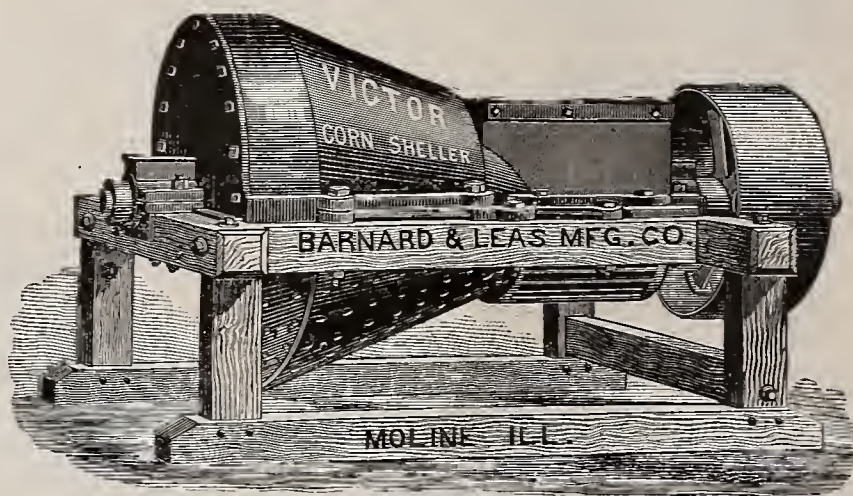
See these machines at work before purchasing.

The Barnard Grain Cleaning Machinery is built in a greater number of sizes, in a greater number of styles, and for a greater variety of uses in the mill and elevator than any other.

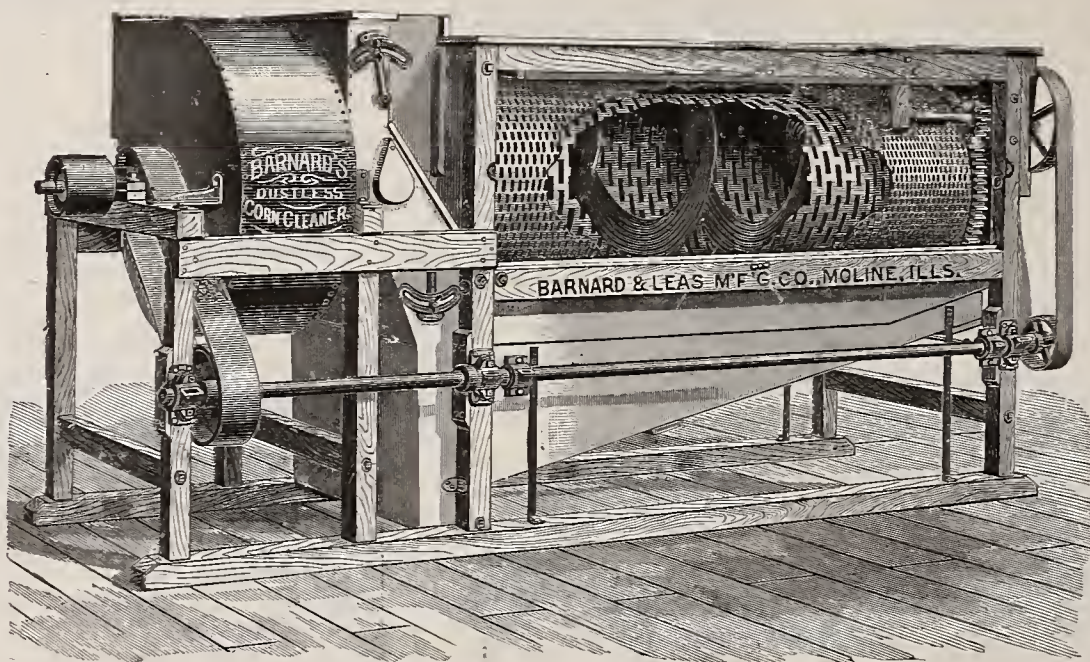
105 Barnard Cleaners were sold during the month of June for mills to be built and remodeled by us, for Elevators and Warehouses and incidental sales.



Cornwall Corn Cleaner.



Corn Sheller.



Double Screen Corn Cleaner.

SEND FOR SPECIAL CATALOGUE OF ELEVATOR MACHINERY.

OUR AGENTS.

M. M. SNIDER, 1325 Capitol Avenue, Des Moines, Iowa,
General Agent Iowa and Nebraska.
J. M. ALLEN, Fergus Falls, Minn.,
General Agent Minnesota, North and South Dakota.
J. F. PAYNE, Indianapolis, Ind., Room 3 Chamber of Commerce,
General Agent Indiana and Eastern Ill.
LEGRAND PAYNE, Indianapolis, Ind.,
Asst. Agent Ind., Eastern Ill.
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General Agent Kansas, Colorado and Oklahoma.
J. H. WILLIAMS, Lock Box 203, Columbus, Ohio.
General Agent for Ohio.
WATEROUS ENGINE WORKS CO.,
Winnipeg, Manitoba.
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General Agent for Missouri, Arkansas and Texas.

W. T. ELLSTON, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.
W. H. CALDWELL, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.
H. R. STAGGS, Springfield, Mo.,
Asst. Agent for Missouri, Arkansas and Texas.
W. B. TALLEY, Paducah, Ky.,
General Agent for the Southern States.
C. P. WATTERSON, Farmington, Utah,
General Agent Utah and States West.
E. D. CAIRL, Colesburg, Iowa,
General Agent for Wisconsin.
CHAS. E. MANOR, P. O. Box 5, Stanleyton, Page Co., Va.,
General Agent for Virginia, W. Virginia, Maryland
and North Carolina.
WM. R. DELL & SON, London, England.

EUREKA



Grain Cleaning Machinery

THE GREATEST VARIETY
THE LARGEST CAPACITY
THE LARGEST NUMBER AT WORK } IN THE WORLD.

THE NEW IMPROVED *Eureka*

*BY Far the
Best Separator
on the Market.*

We make every part of this machine
under our own

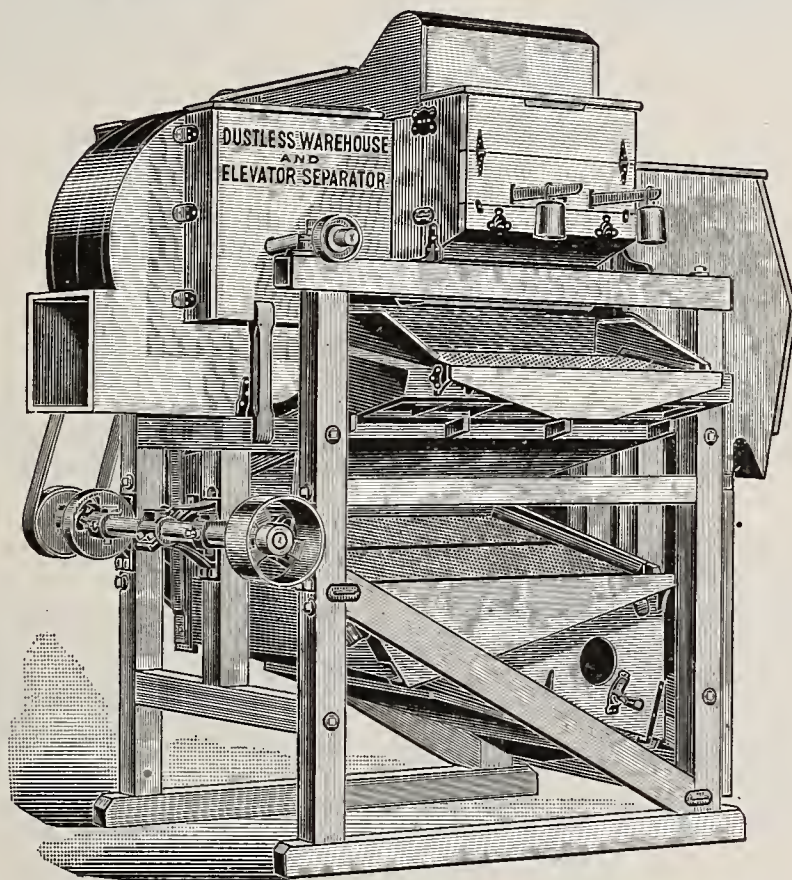
PERSONAL SUPERVISION,

and are thus in a position to guarantee
it as to material and workmanship.

Will positively do more and better
work than any other Separator.

Wide Suction.
Perfect Separation under Control.
Interchangeable Screens.
Large Cockle Screen.
Automatic Feed.

Will run perfectly smooth and quiet.
Has large capacity.



WILL SHIP ONE ON 30 DAYS' TRIAL.

*Warehouse
and
Elevator
Separator,*

WITH LATERAL-SHAKE
MOVEMENT
OF SCREENS.

Conceded by all to be the best arrangement for
ridding grain of impurities. Has Counter balances
and new Pitman Drive.

READ WHAT USERS SAY OF THEM:

CLYDE, N. Y., May 21, 1894.

MR. S. HOWES, Silver Creek, N. Y.

DEAR SIR:—I enclose you check for \$ to
balance account for the Eureka Warehouse Separ-
ator. I take pleasure in informing you that I am
much pleased with the machine, which has done
good work from the start.

Yours truly, GEO. B. GREENWAY.

YORK, PA., July 18, 1894.

MR. S. HOWES, Silver Creek, N. Y.

DEAR SIR:—We are in receipt of your favor o
the 16th. The Warehouse and Elevator Separator
sold us by you is giving us great satisfaction. We
are not in the habit of recommending any ma-
chines, but must speak well of this one.

Yours truly, P. A. & S. SMALL.

Address **S. HOWES, Silver Creek, New York,**
SOLE BUILDER.

GRAIN CLEANERS.

IF YOU ARE IN NEED OF A PERFECT GRAIN
CLEANER, WE OFFER YOU

The Monitor Separator

These machines have stood the test and are pronounced by leading elevator operators superior to anything heretofore used. Their opinions are based on actual experience.

Nearly all of the leading cleaning elevators built during the last four years have adopted

THE MONITOR

They are simple, yet perfect in construction and durable.

They do the maximum of work with the minimum of power.

They have a powerful, but perfectly controlled air current.

They can be quickly adjusted to do any class of work desired.

They will give you grand satisfaction.

They are modern machines, and you will find them in all of the modern cleaning houses.

If you are interested in this line we ask you to investigate.

BARLEY.

We are making a special **BARLEY CLEANER**
that stands at the head.

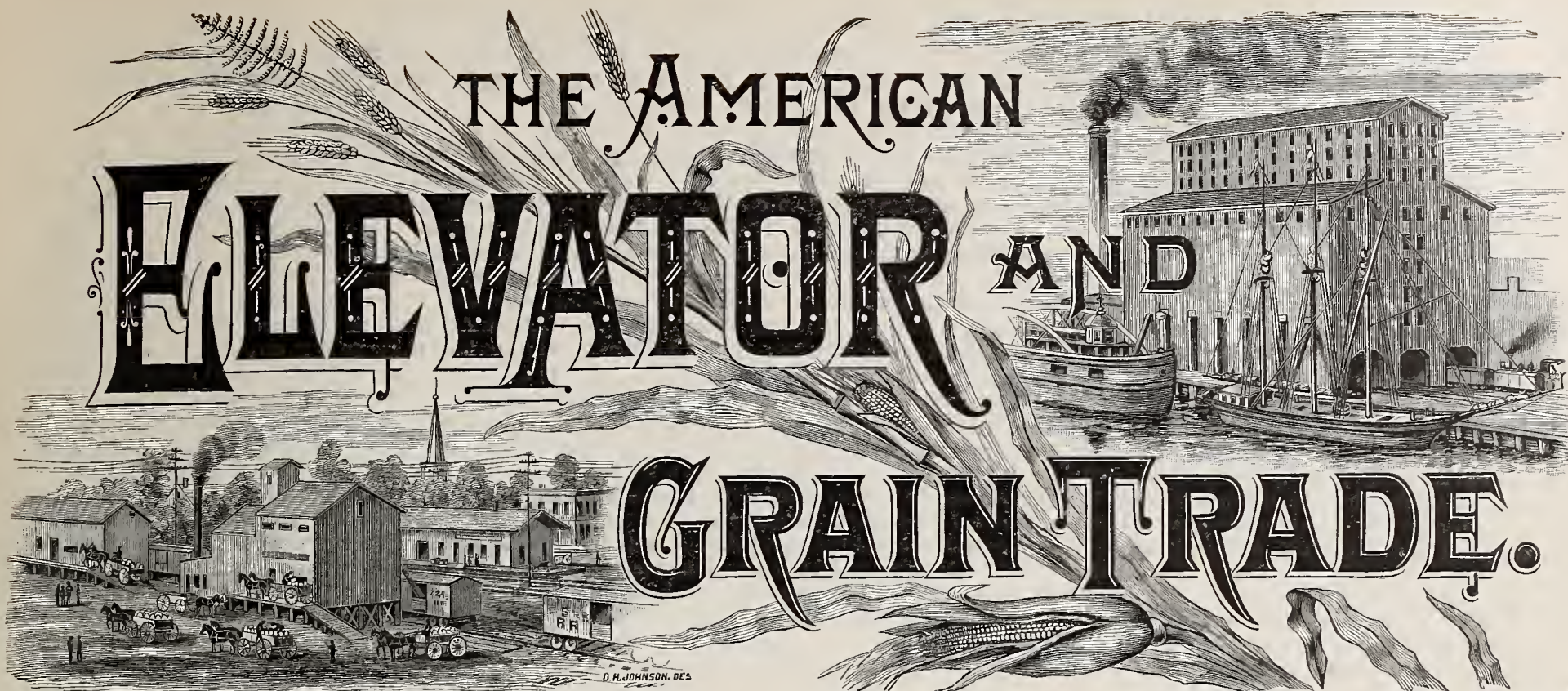
FLAX.

Our **Monitor Flax Cleaner** will give you good
results. Close work with large capacity.

Huntley, Cranson & Hammond

SILVER CREEK, N. Y.

B. F. RYER, GENERAL AGENT, 799 MONROE STREET, CHICAGO.



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No. 6.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

THE NEW "REPUBLIC" ELEVATOR AT MINNEAPOLIS.

One of the most widely known elevator owners and operators is located in Minneapolis, Minn., and he very materially contributes to making the standing of that city near to the head in the amount of storage capacity for grain. From Maine to California the sign of "Pv" carries with it an assurance of reliability and honest methods.

An elevator recently erected for F. H. Peavey & Co. at Minneapolis is shown in the accompanying illustration. It was built by Tromanhouser Bros. of Minneapolis, and is regarded as one of the best constructed and finest equipped elevators in that city. It is typical of all of the Peavey houses in its solid construction and possession of every modern convenience that a modern elevator should have. The elevator property is 200 feet deep and half a mile long.

The elevator has a capacity of 1,750,000 bushels. The storage end of the house is 70x406 feet in size with cribbing 73 feet high. The cupola on the working end is 68x74 feet and 150 feet high. In the working department are four No. 9 Monitor Cleaners, 1,400-bushel garners, and 1,400-bushel scales. The elevator buckets are 7x22 inches. The power plant is located in a detached brick building, a 200-horse power Reynolds-Corliss Engine furnishing the power.

The machinery was started up October 5, when the first carload of wheat was received, and November 21 the house being full it was shut down. It was practically filled in 40 days after the first car of wheat was received. This is undoubtedly the best record ever made by an elevator of such large capacity.

The elevator is situated on the Northern Pacific Railroad tracks with connection with the "Soo" and Great Northern roads. There are two miles of tracks

on the elevator grounds with 8 per cent. grade. The yard is so arranged that 150 cars can be taken on the elevator tracks and unloaded and empty cars taken care of without a switch. There are side tracks sufficient to hold 200 cars. The unloading capacity is 175 carloads in ten hours.

This elevator was built by the Republic Elevator Company to take care of the 100 country elevators on

SHIPPING LITTLE GRAIN FROM KANSAS OR NEBRASKA.

Reports from Kansas and Nebraska show that the trans-Missouri grain traffic is practically at an end and will continue so until a new crop is harvested. Railroads, instead of transporting grain to Eastern markets, are hauling it into Nebraska, Kansas and other Western states, the home supply not being able to meet the demands. There are about seven counties in Nebraska without any visible supply of wheat, and hardly any other grain, tributary to the Burlington, Union Pacific and Rock Island. These counties are located in the eastern and southwestern portions of the state, in a belt where the average wheat rate is 26 cents per 100 pounds or 15.6 cents a bushel.

The Chicago value in the territory, allowing nothing for the middleman, is 38 cents a bushel, and during the entire fall wheat has been worth from 53 to 55 cents per bushel to Central Nebraska mills, where it has not to undergo classification, weighing, switching and other charges incident to Chicago delivery. At the mills it has only to be subjected to a 10-cent rate or 6 cents a bushel. This wheat has been worth 47 to 49 cents to the producer or shipper

on the track in the territory indicated, or 10 cents a bushel more than would be realized from a shipment to Chicago. Wheat, therefore, is, in that part of the country, held for future delivery or is being turned over to the local mills to meet local demands. The same condition prevails with oats and corn. But the demand is not alone confined to Nebraska and Kansas. There is also a demand from the territory tributary to the Rocky Mountains, bearing down upon the states adjacent for these supplies, especially for corn and oats. Under these conditions the home demand is far greater than the supply and the railroads have



THE NEW "REPUBLIC" ELEVATOR AT MINNEAPOLIS.

the Northern Pacific Railroad owned by the Monarch Elevator Company, which is embraced in the Peavey Elevator System. The Republic Elevator Company is part of the Peavey Elevator System. Its officers are Frank H. Peavey, president; B. H. Woodworth, vice-president; B. H. Morgan, secretary; C. F. Deaver, treasurer.

Commission men will make a living out of their business, but they cannot do it honestly unless a fair percentage is paid for their services. Cheap men at best are always the most expensive.

virtually gone out of the business of transporting grain, not a carload of wheat having been sent east by the Burlington for the last two months.

THE SYSTEM OF GRAIN INSPECTION; ITS ESTABLISHMENT AND GROWTH.

NO. X.

The grain inspection department of the Buffalo Merchants' Exchange was established in 1884 by members of the Exchange who were interested in the grain trade. The department is under the general charge of the flour and grain inspection committee, which appoints and discharges the chief inspector, the sub-inspector and assistants, and designates what proportion of the net income shall be given to the chief inspector, and also regulates the salaries of the sub-inspectors and assistants. The sub-inspectors and assistants are appointed and discharged upon the recommendation of the chief inspector.

The fees for inspecting, sampling and taking care of cargoes are fixed by the inspection committee and are collected in such manner as the committee designates. The amount collected is known as the "Grain Inspection Fund," and is paid to the treasurer of the Exchange, who keeps all amounts so collected separate from the funds of the Exchange unless the amount increases to exceed \$5,000. All salaries and other expenses connected with the grain inspection department are paid from the grain inspection fund. In 1893 the special committee on the weighing department of the Exchange made a report, indorsed by the grain committee, recommending the following changes, which were adopted: That the fees for weighing grain from vessels into elevators or from elevators into vessels or side bins be changed from 20 to 15 cents per 1,000 bushels; the fees for weighing wheat, corn, rye, barley or flaxseed for canal boats, to or from elevators from \$1.60 to \$1.50 per boatload; the net receipts of the weighmaster's department (\$4,000) should be considered the salary of the weighmaster, and the weighmaster should be appointed by the trustees of the Exchange instead of by the grain committee.

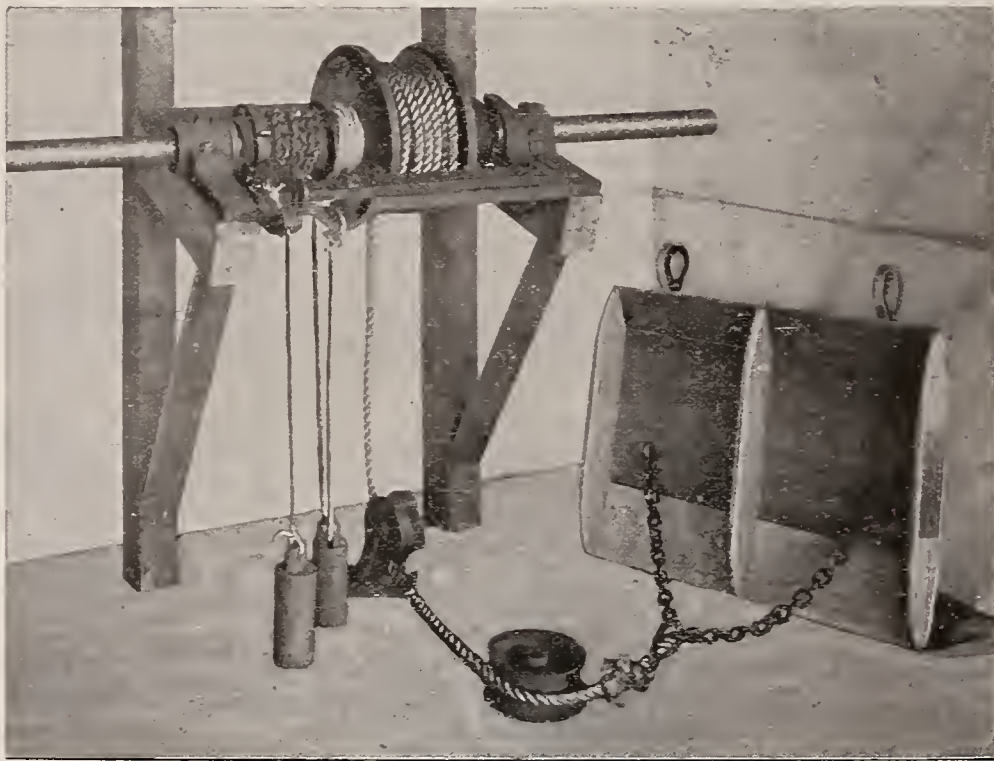
The chief inspector or any assistants employed by the inspection committee are prohibited from inspecting, sampling or issuing any certificates of inspection for any grain for anyone who is not a member of the Exchange. The chief inspector and assistants are required to keep an accurate record of the number of each car of grain inspected and the name of each cargo, the kind and grade, and if inspected out of elevators the quantity of grain inspected and weighed, and the date of such inspection. On all cargoes inspected into store, if not graded and bulked, it is the duty of the chief inspector or his assistants to furnish to the consignee of all grain received a sample of the grain and a certificate of inspection stating grade and quality.

Any "plugged" car of grain is graded according to the poorest quality of grain found in the car, and any grain mixed with foreign substances, screenings or otherwise "doctored" with intent to deceive is not classed as high by one grade as it would otherwise merit. Weevilly, burnt, limed or grain contaminated with iron ore is sold by sample regardless of grade.

In March, 1893, twenty-four firms dealing in grain presented a communication to the inspection department relative to oats arriving in car lots. The object was to have the notation "Car too full to get trier to bottom of car" abrogated except in rare cases. After careful consideration the committee recommended to the chief inspector; first, that when a receiver complains of a car so inspected the car be re-inspected and that the receiver be instructed to accompany the

sub-inspector appointed to do the work; second, if the car is shown to have been properly inspected the receiver be charged two inspections; third, if the car proves to have been improperly or not thoroughly inspected the deputy at fault be fined \$1.

Any holder of an inspection certificate which is not over two days old and who is dissatisfied with the grade of any lot of grain may call for a re-inspection subject to appeal to the inspection committee. If the decision of the inspector is sustained the cost of re-inspection is borne by the holder of the certificate; if the judgment of the inspector is not sustained on account of error in the inspection the Exchange is liable for damages to an amount not exceeding the sum in the grain inspection fund at the time when such damage is ascertained and audited by the inspection committee, a sufficient sum being first deducted from the fund to provided for the salaries and expenses of the inspection department due at the time; the inspection committee may, however, at its discretion allow damages to the amount of the bonds of the chief inspector. When the appeal is not sustained the appellant is required to pay a fee of \$3 on each car of grain; on canal boatloads of grain \$10; on cargoes under 25,000 bushels of grain \$10; and of cargoes of 25,000 bushels and over of grain \$20. The amounts



THE CLARK POWER SHOVEL.

THE CLARK POWER SHOVEL.

At the present prices of grain one can scarcely imagine what would become of the elevator man if he had to employ men, working tediously, as of old, with the scoop in unloading the cars of grain received at his elevator. The extension and growth of our grain handling industry made the steam shovel a necessity, and where it formerly took hours to unload a car, the same work is now done in as many minutes. The Clark Automatic Steam Grain Shovel has undergone many improvements since its introduction many years ago, and the mechanism illustrated herewith has only a family resemblance to its forefather.

The shovel itself is strongly constructed of the best material and made to stand the constant wear to which shovels are put. The propelling mechanism is very simple and perfectly automatic. When the shovel is taken into the car the motion of the spool on which the rope attached to the shovel is wound winds up and raises the weights. When the man guiding the shovel reaches any desired point in the car he allows the rope to slacken. The weights then reverse the motion of the spool until it is thrown into gear. The rope attached to the shovel is wound on the spool until the shovel reaches the car door, when the action

can be repeated. The fact that the Clark Shovel has been on the market many years, and has been used all over the country, substantiates the manufacturer's claims for its excellence. This machine is now manufactured by the Link-Belt Machinery Company of Chicago, who will supply all desired information.

"TO SELL OR TO HOLD."

Many in the great corn-growing states are considering the question whether it will be wiser to sell corn this fall or to hold it until next spring or summer. The answer is not easily given. Prices are above the average. No one can say with certainty whether they will advance or go lower.

Some of the arguments on either side of the question may be briefly stated thus: The corn crop is a short one, and follows a short one; hence prices ought to

be high. Many farmers are compelled to sell, and this will tend to put down prices for a time. Buyers often will not accept corn as of standard grade this fall, although it will be more than usually dry for the season. Possibility of bad weather or distance from the market may make it more difficult to deliver "from the field" than next summer. On the other hand, corn shrinks much after husking. Thoroughly air-dry corn contains about 11 per cent. of water. When husked in good condition corn of good-sized ears often contains twice this per cent. of water. A loss of 10 per cent. or more by shrinkage is generally to be expected. There is also danger of loss by rats, by shelling and waste, aside from possibility of loss by thieves, fire or storms. There is a certainty of a good price now, only an uncertainty whether a better net price can be had later.

Over the larger part of Illinois the corn crop is pretty good. Dealers at some of the railway stations are offering 40 cents a bushel, taking the corn as husked. It is understood that eighty pounds of ear corn will be taken as a bushel, while next summer seventy pounds will be taken.—*Prairie Farmer*.

A dispatch from Winnipeg says that as a result of the recent controversy between the Western and Eastern grain dealers regarding the mixing of wheat in transit, the Western dealers have decided to boycott the Eastern men altogether. Several orders received recently from Toronto and Montreal buyers were ignored. It is said that henceforth all grain shipped will go to New York direct, instead of via Toronto or Montreal.

collected are divided in equal proportions among the members of the committee serving on the appeal.

The chief grain inspector is Mr. Conway W. Ball, who has one clerk and eight deputies under his direction. The following table shows the amount of grain inspected on track, into and out of elevators for the years 1892, 1891, 1890, 1889, 1888 and 1885:

	Cars on track.	Cars out of elevators.	Cargoes into elevators. Bushels.	Boatloads out of elevators. Bushels.
Total 1892.....	12,758	11,922	16,454,992	2,613,279
Total 1891.....	15,038	9,932	17,727,852	2,411,451
Total 1890.....	10,887	9,668	18,943,721	4,005,972
Total 1889.....	10,179	7,629	17,462,400	2,889,096
Total 1888.....	9,391	5,710	16,481,965	2,726,407
Total 1885.....	7,570	4,675	17,153,897	1,777,949

[TO BE CONTINUED.]

The AMERICAN ELEVATOR AND GRAIN TRADE, monthly, and the *Hay Trade Journal*, weekly, and containing reports of all hay markets, will both be sent to one address for \$2 per year.

It is reported that the National Linseed Oil Company expects shortly to run its Philadelphia mill exclusively with flaxseed from the East Indies. The reason given is that the domestic crop is insufficient, there being an enormous demand from the Eastern states. This comes in the face of an overproduction of unprofitable wheat; and as it is said that flaxseed can be abundantly and profitably grown in Washington, the foreign importation could be easily shut off if farmers had sense enough to grow crops for which the demand very much exceeds the supply.

A NEW STYLE OF COUNTRY ELEVATOR.

A new style of elevator has been designed and is now being constructed by the Western Elevator Construction Company of McPherson, Kan. It is called the "Model Elevator," and the ideas worked out in the plans for this building embrace economy of room, solidity of construction and rapidity of handling, combined with simplicity of detail and comparatively low cost. The ground plan is only 16x24, yet within this compass is storage room for 4,000 bushels of grain. The handling capacity is said to be 500 bushels per hour, with a single horse as motive power. One man can readily weigh up, dump and load out five cars a day, doing all the work with one horse and no other help, if his cars do not need too much coöpering.

The house has two bins holding 700 bushels each, one bin holding 600 bushels, and two bins 100 bushels each, a double dump holding 1,800 bushels. A flexible loading spout is set at such height as will give sufficient fall to send the grain to the end of a 34-foot car. The grain from all five bins and the two dumps can all be spouted together into the car or into a wagon standing on the dump floor or into any one of the other bins or dumps.

The 600-bushel and the two 100-bushel bins are intended for sacking or retail purposes. An unloading spout placed alongside track and leading directly to the boot is a convenience that every elevator man will appreciate. This spout is not shown in illustration, but is placed to the right of the pit window, running through the wall.

The spouts leading from the head to the different bins are arranged to empty at the highest possible point of delivery, thus filling the bins to their full capacity without any necessity for scooping back. In fact so complete is the arrangement of inclines to the different bins that there is no necessity for a scoop on the premises under ordinary circumstances. A switching arrangement with a horizontal movement of only 24 inches will change the flow of grain into any spout. This device, which is something new in construction, gives the greatest economy of space where space is most valuable. The flow of grain is changed into the different bins by means of a lever worked from the dump floor.

The door leading out on the platform gives full view of, and easy access to, cars on track. In mixing wheat it can be inspected any moment as it falls into the car. Any variation from what is required can be seen at once and rectified instantly.

The dump and bin bottoms are all built at such an incline that they empty readily to the last bushel. The trap door in dump floor covers the shifting slide and the opening is full up to the floor, leaving only a 2-inch floor instead of the usual 16 or 18 inch header, thus allowing the dumps to be filled to almost their full capacity without the usual scooping back of the last 150 bushels.

The dump logs are united by a solid platform, move both at once, and thus do away with any possibility of the wagon wheels slipping into the open slots. The pins upon which the logs rest and turn are arranged at exactly the proper distance for prompt, easy dumping without being too quick. By an arrangement of blocks upon the logs the wagon rolls at once into the proper place with no pulling or shoving, as the driveway is the exact width necessary for proper driving. There can be no "wobbling" off by bad drivers. The dump trigger is also on a new plan. It is worked by a three-eighths iron rod with a handle for a straight pull upward. It has no long slot to catch all the loose grain.

Every shaft, every bearing, every chain or belt about the building is in plain view in good light, and yet out of the way. There is no chance for clothing to catch on exposed sprocket wheels. The oiling can all be done by a man in his best clothes as well as in his overalls. Even the "pit," that terror of elevator men, is lighted by a window placed under the platform. Any work necessary there can be done without

the aid of a lantern. The boot with five spouts emptying into it is also improved. If the cups for any reason stop the grain also stops. There is no "clawing" out of from two to four bushels of grain from the clogged boot in order to start up again. The building is absolutely rat proof.

LINE AND TERMINAL ELEVATORS.

BY J. A. DEMUTH.

A generally accepted principle in economics is the fact that the coöperation of capital in any enterprise depends for its continuance on the question of mutually advantageous results. It is seldom that the most fervent spirit of patriotism or of religion is unmixed with considerations of material or pecuniary advantages. Much less then may we expect the continuance of any purely commercial project which does not plainly promise mutually profitable returns. "Heads I win and tails you lose" is a condition of coöperation which is generally shortlived. Lo, the poor Indian, was not slow to understand, when it came to dividing the spoils of the hunt between himself and his whitefaced brother, that the latter had not said "Turkey to him once." In submitting a scheme for the storage and transportation of grain, I shall en-



A NEW STYLE OF COUNTRY ELEVATOR.

deavor to bear in mind the futility of the Paleface's effort in making a mutually satisfactory division of the profits, with the turkey on one side and the buzzard on the other side of the balance sheet.

The present method of grain shipment and storage cannot be said to be mutually profitable to shippers and transporters. There is too often a suspicion of buzzard at the shipping point and turkey at the terminal point, or vice versa. The pivotal points of inspection and weight are nearly always centered at a remote distance from the shipper, and it too often happens that their turning is in the direction of the rising sun. I presume that no one but a grain shipper can have a full sense of the faith which induces peace of mind when he ships on a close margin, and subject to weight and grade at destination, a dozen carloads of wheat. In other branches of commerce the considerations for an exchange are fixed before the exchange is made. But the grain shipper must wait until a disinterested party, called an inspector, and another ditto, termed a weighmaster, have had their say as to the actual value of his goods, before he may know definitely whether the trade is going to be profitable or profitless. A system of transportation and storage which will eliminate these factors of uncertainty and loss is certainly very desirable in these days of close margins.

During my services as a grain clerk in the employ of the L. S. & M. S. Ry. Co. I conceived the notion that this way of shipping grain was entirely practicable. Certain features of our system of elevators were the foundation upon which, with the permission and coöperation of the powers, I imagined I could devise a system of transportation and storage which would

effectually dispel the uncertainties of a consignment.

It is needless to say that the powers were never apprised of my plans; and even if we had succeeded in getting the loan of an ear of such imposing proportions, the plans would, in all probability, have remained in my mind to this day, just the same. In those days there was a deal of mysteriousness about rates, and rebates, and the advantages of long hauls over short hauls, which made my scheme entirely impracticable; but since these matters have become easier to understand, the feasibility of my plan becomes apparent.

The certain features above referred to were: 1st. The weighing and grading of grain by the railroad company at its receiving points. 2d. The guarantee by the railroad company to the shipper of the exact weight and grade at the terminal elevator of its system. These features were in practical operation for years and would, no doubt, have continued in successful operation but for the system of rates and rebates and what not which every road was obliged, in self-defense, to adopt. Therefore, whatever may be said of the impracticability of the system which I have evolved, so much of it is already proved by years of experience to be entirely practicable.

The feasibility of my scheme requires: 1st. Line elevators or grain receiving houses, where grain is graded and weighed with the coöperation of the owner. 2d. Terminal elevators. 3d. A schedule of rates for transportation based on distances. 4th. A system of grain receipts which would make the line elevator receipt negotiable in the market where the terminal elevators are located. 5th. A uniform rate of storage for line and terminal elevators. 6th. National and state supervision of rates to the end that all rates should be absolutely equitable and inflexible.

Line elevators are entirely practicable. It is true that the erection of mills may divert receipts from the company's grain houses and so render them unprofitable, but this objection might be overcome by using such houses for storage of grain from other stations where the receipts should be in excess of their storage facilities. Perhaps a car could be devised which could be used for receiving at stations where a permanent house would not be considered profitable. This car could be supplied with scales and manned by a trained in-

spector, and could, no doubt, be arranged to answer the purpose of a portable receiving elevator. It could receive at certain stations on certain days, and could transfer its receipts to the nearest line elevator. With such an arrangement line elevators would not be necessary at all stations; in fact, if such a car could be made practicable, it would so reduce the cost of line houses as to enable the company to operate steam elevators at its principal receiving points. The weighing and grading should be done with the most approved appliances and on some plan which would make errors impossible. Grain should be received from the owner in person, so that the question of incorrect weighing could be entirely eliminated. This matter of weights and grade is, it seems to me, the source of most of the ills which the grain trade is heir to. It is the weak point in the present system. "Subject to weight and grade at destination" has been the cover for unparalleled dishonesty and is a loophole the like of which can be found in no other branch of commerce. I have time and again noted the indifference with which the experienced weighman does his work, and compared his disinterest to the interest and anxiety with which the owner awaits the results of the weighing "at destination." The weighing and grading of grain should be done under the very nose of the owner and his acquiescence therein be made a condition of its receipt by the carriers. This could be accomplished by the system of line elevators or receiving cars.

2d. Terminal elevators should be located at natural grain centers, as Chicago, Duluth, Toledo or Detroit. A road having its terminus at inland points should locate its terminal elevators at a point connecting

with some road having a terminus at a natural center. In such cases the road receiving grain from an inland road should have facilities for weighing and inspecting and should not receive grain unless there should be an agreement of weights and grade. A small transfer elevator with weighmen and inspectors from both roads would accomplish the business. Terminal elevators would be obliged to accept the grades of all of its line elevators and honor their grain receipts by issuing regular negotiable receipts on presentation of the original receipts issued to the owner of the grain.

Its freight charges should be collected on presentation of the original receipt. The terminal elevators should receive duplicates of receipts issued by line elevators, which would enable them to compute freight charges and have their own receipt ready for delivery on presentation of the original. The terminal elevators would have authority to order in grain of any grade from any of the line elevators, and in this way keep their bins fully supplied. They would also receive all surpluses and make good all shortages of the line elevators. The rate of storage should take effect from a certain date after the issue of the original receipt, whether the grain is held in a line elevator or in the terminals.

3d. A schedule of rates, based on distances, is the only equitable plan for imposing a freight tariff. There may be some advantage to the railroad company in having a long haul, but it is not fair that patrons of the road within a short distance of its terminus should help to make profitable the raising of grain by patrons at greater distances. If any other basis were equitable it would apply with equal force to passenger rates.

4th. A system of grain receipts which would make the line elevator receipt negotiable in the terminal market would have the effect of securing to the owner of the grain the first advance in prices after his original receipt had been placed in the hands of his commission merchant. There would be no delay occasioned by car famine or blockades. His wheat would go to market in an envelope with a special delivery stamp if need be, and the railroad company could take its own time in getting the real grain into its terminals. This arrangement would be highly advantageous to the owner of the grain and also to the railroad company. To the railroad because it could be moving grain to market from any station and at any time it was convenient for it to do so. That obnoxious bill of lading, with its "Subject to weight at destination," would have no terrors for the grain shipper. He would know exactly how much grain he had and what sort of grain it was before it left his hands. He would be there to see it weighed—to test the scales for himself—and to fight for his grade. He might provide himself with a sealed two or three hundred pound weight and load it onto the scales a dozen times while his grain was being weighed in. There would be no end to the satisfaction he would derive from having the weighman and inspector under his nose instead of having him a hundred miles away.

5th. A uniform rate of storage for line and terminal elevators would of course be necessary; and this rate should be as low as possible and include a maximum period of free storage.

6th. In order to perpetuate this system, it would be necessary to have national and state surveillance of rates. Any discrimination in favor of individual shippers or markets would create more favorable markets elsewhere than at the termini of roads, and thus some terminal elevators would reap advantages to the disadvantage of others. With an inflexible tariff rate the price of grain in one market would be the price in another plus or minus the cost of transportation. In this way each railroad would receive the grain traffic which naturally belonged to it.

All grain received at line elevators would be subject to delivery at the terminal elevators and would therefore be placed practically in the terminal market the day after its receipt at the line elevator. The advantages to shippers would be the elimination of losses in weight by defective cars or otherwise, the certainty

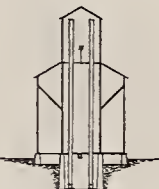
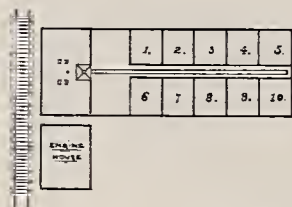
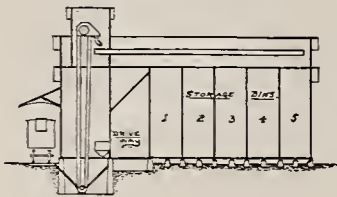
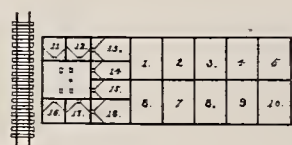
of grades, the storage of their grain in the nerve centers of trade where advances could be easily obtained pending a favorable price, and many other points.

Among the advantages to the railroad companies would be the privilege of moving grain at their convenience, the elimination of rate wars, the certainty of handling the grain products of its territory, and other points, to say nothing of the profits of operating terminal elevators under the most favorable conditions.

PLANS FOR MODEL COUNTRY ELEVATOR.

The accompanying drawings show outline plans of a model country elevator of 25,000 bushels' capacity. Constructed on these plans the building would be about 77 feet in length by 27 feet in width. This is an end-track elevator and is designed to economize in the handling of grain. With the track at the end and the driveway through the working part of the elevator grain can be received and shipped at the same time and received from wagons and cars.

In the working end are the necessary machinery, scales, receiving sink and two elevators and eight shipping bins. The power plant is situated off the working end in a detached building. The storage bins are ten in number and take up the greater part of the building. The grain is conveyed to and from these bins by belts at top and bottom of bins. The receiving and shipping track is protected from rain, snow



PLANS FOR MODEL COUNTRY ELEVATOR.

and sleet by a projecting roof. The house was designed by the Chase Elevator Company, architects of grain elevators, Chicago.

THE MOVEMENT OF CANADIAN GRAIN VIA BUFFALO.

A Montreal banker said to a leading grain merchant a few days ago: "If you will open an agency at Buffalo, I will start a branch bank there, as I see that most of our Manitoba grain is finding its way to the American seaboard via that great center of trade, and I might as well divide commissions with American bankers on our own grain, rather than lose the whole of it."

Different influences have been at work to divert this important traffic from Canadian to American territory, such as the mixing of No. 1 Hard Wheat with inferior and rejected grades, the high local freights of our railways in transporting it to the seaboard, and also the anti-Canadian policy adopted by our government regarding inland and water transportation.

This last named policy has been admirably elucidated by Mr. James B. Campbell of this city in a letter to the *Toronto Globe*, in which he points out in a very forcible and graphic manner how our through grain traffic has been adversely affected by the enactment of laws intended to protect Canadian interests, but which in their application has simply protected American interests instead, and proved an important factor in turning over fully three-fourths of the Manitoba grain trade to the United States.—*Montreal Trade Bulletin*.

The grand jury in session at Chicago recently found indictments against 25 bucketshop concerns doing "business" in the city. For the benefit of legitimate traders and the protection of irresponsible suckers, such institutions should be kept under.

THE SUSPICIOUS FARMER AND THE AUTOMATIC GRAIN WEIGHER.

As a rule men are suspicious, and no class of men more so than the farmer. But strange to say, the farmer is less suspicious of the fakir and the confidence or patent right man than he is of the reputable manufacturer or merchant.

When the automatic grain weigher for threshing machines was introduced, there was a strong suspicion in the minds of many farmers that it was an invention of some unscrupulous person, designed to defraud the farmer to the profit of the thresherman. But when actual tests and comparisons demonstrated that the machines were as near correct as was possible, the prejudice gradually faded away, and thousands of weighers are now in use.

But there are localities where none are used and probably never will be. The thresherman who insists on attaching a weigher to his machine can get no threshing to do in these places. A prominent thresherman, speaking of this subject, said: "In my neighborhood there are still a few who object to the weigher. I threshed for a man this year who made a terrible fuss and said I would have to take the thing off or quit the job. It was a good job, and I hated to lose it, so I detached the weigher. He then produced one of those tally boxes in which you set half bushel measures. As fast as one is filled you slide it out, and in so doing the measure strikes a device which causes the machine to register. In this way the number of half-bushels is recorded. We started on the job in

good shape, and the farmer and his two sons were handling the measures. After we had been running some time I glanced down from the platform where I was standing feeding, and saw something which knocked me cold for a minute. The farmer and his boys had discovered that by lifting the measures instead of sliding them the register would not be affected. And that was what they were doing. I watched them a few moments and saw them lift out ten measures in fifteen, and then I signaled the engineer to stop. I got down, walked up to the tally box, kicked the thing out of the way, and said: 'Now, old man, I've got you. I'm going to put that weigher back and

use it on this job. If you make a whimper, I'll have you arrested for attempting to defraud me. After we are through, you may weigh the grain on your own barn scales, and if it differs from the weigher's record, we will settle by your scales.'

"Well, he was too much abashed to say a word. We continued with the job, using the weigher, and after we were through we weighed the grain on his scales and found that in 1,800 bushels the weigher was short just five bushels, making 10 cents in his favor. But I made him pay me 10 cents. I don't think he will object to weighers any more."—*Farm Implement News*.

ACCEPTANCE FOR SHIPMENT.

Before a common carrier can be held responsible for the safety of freight there must be some sort of delivery and acceptance of the same for transportation, says *Business Law*. But such acceptance may be actual or constructive. If, for instance, the property be deposited at a designated station in accordance with a conventional arrangement between the parties in respect to the mode of delivery, or if it be deposited with a third person, who is authorized by the carrier to execute a bill of lading in the name of the carrier, then such mode of delivery is as complete as if the property had been actually deposited with the carrier.

On the other hand, the Supreme Court of Tennessee holds (*Stewart vs. Gracy*) that no liability attached where the freight was not deposited with an agent of the carrier, but was left in the custody of an agent of the shipper, and constructively in the possession of the shipper himself, no bill of lading or receipt being issued by the carrier for the property, the carrier being simply given the warehouse receipt and an order from the shipper to enable them to get possession of the freight.

ROBINSON'S CAR PULLER.

A powerful car puller has recently been invented by D. A. Robinson, president of the Simpson & Robinson Company, elevator architects and builders. It is of a special design, as is shown in the illustration given herewith, with a friction clutch, gear, capstan and manilla rope. It will pull 25 cars heavily loaded with ease, and can be used on several different tracks. It can be changed to pull in different directions easily and quickly.

It can be seen at the South Chicago Elevator of the Chicago O'Neill Grain Company, where it is doing all and more than is claimed for it. So far Mr. Robinson has placed these pullers only in houses he erected, but he is now prepared to supply the trade.

AN INSPECTOR'S OBSERVATIONS ON THE CROPS.

Captain John O. Foering, chief grain inspector of the Philadelphia Commercial Exchange, has just returned to the city after an absence of three weeks, during which time he made his annual tour through the corn-producing states of the West, gathering general information for the grain trade, and investigating the general condition and the prospects for the movement of the new crop of corn. He visited some 54 cities and towns within the confines of Ohio, Indiana and Illinois, which have produced the largest portion of the crop this year, and, traveling entirely by daylight through the corn-producing sections, had a good opportunity to obtain the information he sought. He has made a very comprehensive and valuable report of the results of his observations to the grain committee for the use of the members of the Exchange, in which he sums up as follows:

"I would say that from my observations I have come to the conclusion that we will have to look to the states of Ohio, Indiana and Illinois for any supplies of corn we may want to meet the export demand that is likely to spring up in the near future. Of course, Kentucky, Tennessee, Pennsylvania, Delaware and Maryland will have more corn than will be required for home consumption, and what we may receive from this source will help to fill a large gap, but it cannot be disputed that the states of Ohio, Indiana and Illinois, which prove to have raised approximately a full average crop of well-matured corn, must be depended upon to supply the bulk of what will be required to fill the foreign orders.

"From all the information I could gather I have put down Iowa for at least half a crop of corn. With this and what wheat they will feed, they should have enough to carry them through until they raise another crop without being compelled to draw supplies from neighboring states. Nebraska, of all the Western states, has suffered the most, and has necessarily been forced to market a very large proportion of its live stock, thereby greatly reducing the home demand for corn. There is no doubt but that in some sections of this state, where the farmers have the means; they have held on to their stock, and will purchase feed to winter it; but such cases must necessarily exist only in the eastern portion, where they had a fairly good crop of corn last year.

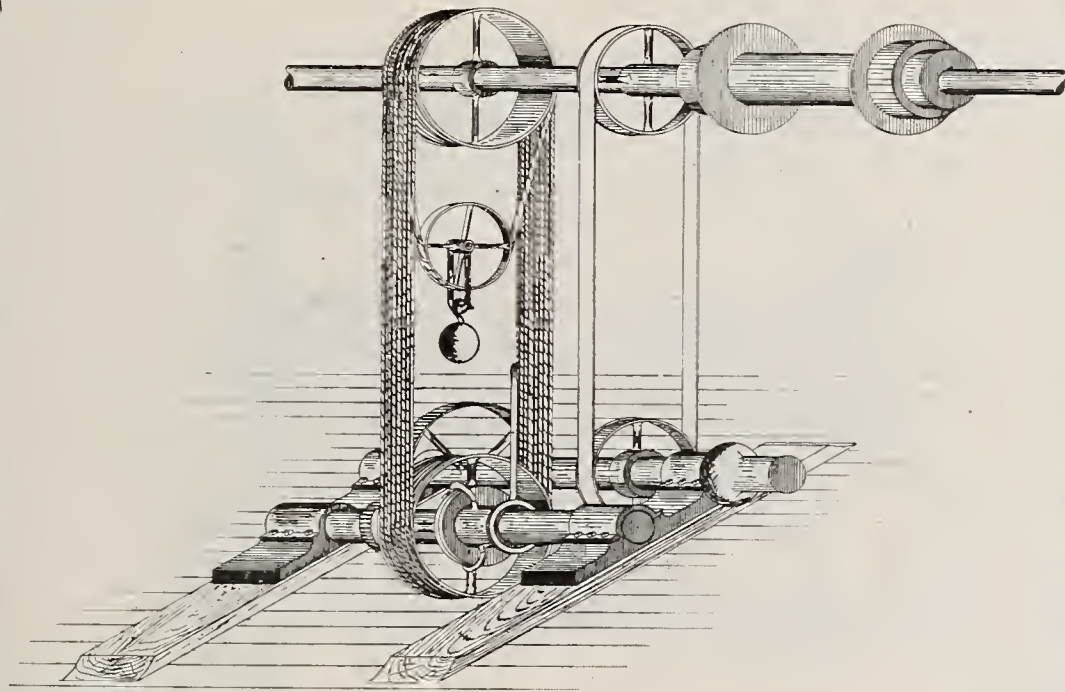
"From all accounts Central and Western Kansas are about as bad off as Western Nebraska; but the eastern part of Kansas and Western Missouri have been especially blessed with an unusually good crop of corn. When they had the severe drouth in the central and western parts of Kansas and Nebraska, this section was visited with copious rains, which secured to them one of the finest crops they have had for years.

"It may also be well to bear in mind that the records show the receipts of unmatured hogs (from five-

eighths to three-quarters grown) at the several packing establishments throughout the West to be unprecedented. This will save a large amount of corn that would have been required to feed these large numbers of hogs in the affected districts until they should have reached maturity. A matter like this, of course, amounts to something considerable at a time when a short crop is one of the certainties.

"Economies that will be practised during the coming months in the sections where the crop is short may make the short crop appear a large one to some of those who predict that there will not be a supply sufficient to meet our wants between now and the making of another crop.

"The movement of the new crop to consumptive and terminal shipping points has fairly begun, and I find the general condition of the corn to be good for so early in the season. The driest corn is being shipped from the southern parts of Indiana and Illinois, and from Kentucky, where they have had a very dry spell for some weeks. The corn this year in the best producing states is, taken as a whole (of course, there are always some exceptions, caused by purely local conditions), the best matured we have had for a number of years; and while the yield per acre is surprising many, there are also expressions of surprise in many sections as to the number of pounds of shelled



ROBINSON'S CAR PULLER.

corn the bushel of cob corn yields (there are less nubins than usual).

"The weather has been unusually good during the past three weeks throughout Indiana and Illinois, and the farmers have taken due advantage of it to gather and deliver all they possibly could, which is shown by the greatly increased receipts in the different markets. If this weather holds good, I predict a heavy movement right along to the first of the year. After that the movement will be apt to lessen, as a very large portion of the surplus will have been delivered, and the balance the farmers will have had time to properly take care of and hold for spring deliveries and for a possible advance in prices.

"I find that the feeding of wheat has been carried on to a very large extent. In Ohio I estimate the quantity fed up to date to have been between 7 and 10 per cent. of this year's crop. Since the corn crop has been made the feeding of wheat in this state has to a great extent ceased. In Indiana the amount consumed for animal food will reach from 9 to 12 per cent. Here, too, many have returned to the feeding of corn. In Illinois a somewhat larger percentage has been fed. As this state had the good fortune to have a large supply of old corn on hand, and as the market price of this commodity was at such a premium over the price of wheat, the holders took advantage of it, and for a long time fed wheat exclusively. I do not think it wide of the mark to say that Illinois has consumed at least 18 per cent. of this year's crop of wheat in feeding it to stock. The far Western states have undoubtedly fed a much larger percentage of wheat, and I think, from all I can glean, the estimates that have been furnished regarding the amount

of wheat already fed and to be fed of this year's crop will reach from 70,000,000 to 75,000,000 bushels, as already stated by several crop experts.

"I made many inquiries as to the financial results obtained in feeding wheat to hogs, and the only practical test I could hear of was made by a farmer on the west side of the Illinois River, near Havana, Ill. He started in with 1,200 bushels of his own wheat, and after feeding that he purchased 600 bushels from his neighbor. He had this wheat coarsely ground at the mill, paying about 4 cents per bushel for the grinding. At the commencement he had a 'pen scale' put in, so that the hogs must pass over it in going out of the barnyard to the runs. A record was kept of the amount of wheat fed each week, and at the end of each week he weighed his entire drove, to ascertain the gain in pounds of hog. According to his records, he claims his wheat netted him 74 cents per bushel at the farm.

"With so much of this wheat consumed in feeding stock all over the country, and taking into account in a rough estimate the amount that has been exported and manufactured since harvest, I was surprised at the different statements made to me in answer to inquiries as to the amounts still held back in the hands of farmers in the winter wheat districts. At very few places did I hear of the stocks being light. It was generally the reverse. Some few reported at least one-third of the crop back, while it was the many who said that at least one-half of the crop in their section was still unmarketed. It is also surprising that with all this wheat in farmers' hands so many mills are compelled to shorten their running hours on account of scarcity of wheat. Some ascribe it to the fact that the farmers are too busy taking care of their corn, while others say the farmers feel that wheat is good property and do not care to sell at present prices.

"The present outlook for the fall-sown wheat in the district south of the Panhandle and Vandalia Railroads, especially through Indiana and Illinois, is not very encouraging. They have had a continuation of very dry weather ever since the wheat was sown, and very little of it has appeared above the ground. While this has been very beneficial in curing the corn and putting it in first-class condition, it has been hard on the wheat, and I think this is one of the most important reasons the farmers have for not hauling the wheat to the mills. At one place in Indiana I have cognizance of a miller advancing his price for wheat 4 cents per bushel in two days without getting a bushel, and this in a locality where they report at least one-half of the crop back in farmers' hands. The quality of the wheat that is unmarketed is reported to be first-class. Throughout Indiana and Illinois they had a splendid crop of oats, and I learn that a considerable supply of this year's crop remains to be marketed. The crop in Illinois was of an exceptionally good quality, and the quantity still held is very large."

A prominent grain dealer in Kansas City says that within two years speculation in grain has fallen off 50 per cent., and that it looks as if the business would never get back. In his view this has come about from the enormous stocks, new methods in the elevator business and the certainty that there will always be carrying charges.

Under date of November 23 a press dispatch says: The Lackawanna steamship line has a very unusual cargo for shipment to Chicago. It consists of 54,000 bushels of flaxseed, which was brought from Calcutta by way of the Suez Canal to New York, and to this port through the Erie Canal. The reasons for shipping the flaxseed to Chicago, when that commodity generally goes in the opposite direction, are not known. The flaxseed would have been loaded on the steamer Thomas Maytham, but there was not enough for a full cargo.

A NEW GRAIN ELEVATOR AT LONDON, ENGLAND.

American elevator men and builders will be interested in the following description of an ideal British elevator which has recently been erected for the Sun Flour Mills Company at Bromley-by-Bow, London. We have taken the description and engravings from the *Millers' Gazette*:

In these days of severe competition one of the dealer's chief endeavors is to reduce as much as possible the cost of grain, and nothing tends more directly to this end than the economical storing and handling of grain from the ship's hold. One of the best installations of silos and grain warehousing machinery in London is that which has lately been installed in the mills of the Sun Flour Mills Company, Bromley-by-Bow, by Messrs. Robinson & Son, Limited, Rochdale, and which we recently had the pleasure of inspecting.

The installation consists of 33 silos, each capable of holding 230 quarters (1,840 bushels), a ship's elevator, capable of removing wheat from the barges at the rate of 40 tons per hour, two warehouse separators to give the wheat a preliminary cleaning before entering the silos, and a system of band conveyors, worms, etc., which allows the wheat to be discharged into any one or more of the silos, where it may be allowed to lie together and be blended if required.

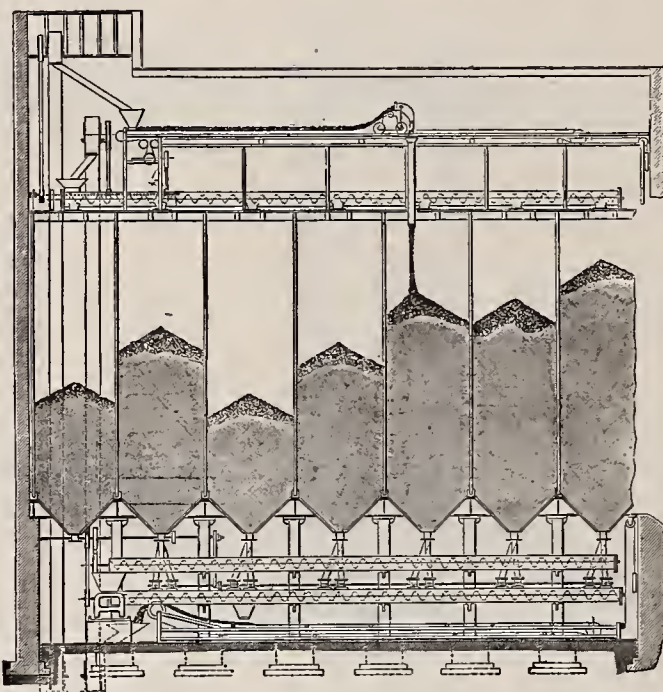
The receiving elevator is fixed outside the building, as will be seen in the accompanying engravings, which show also longitudinal and transverse sections of the silos. These sections show the method of conveying the wheat, which is elevated from the vessel to the top of the building to the various bins or silos by means of an endless band conveyor and a movable distributing hopper. The wheat is first lifted by the ship elevator, and sent to the wheat cleaning department marked A. It is then elevated to the scales B, where the grain is weighed, and thence it is sent to two powerful warehouse separators, which separate the rough impurities and exhaust the dust from the wheat before sending it to the silos. Below the first set of bins, which are 12 in number, and may be called storage bins, there is another large band conveyor, with a capacity of 25 tons per hour, and fitted also with a movable hopper, so that the wheat can be discharged from any one of these 12 silos onto the band and sent to another elevator which raises the wheat to another band conveyor with a telescopic spout, and which delivers the grain to any one of the next set of 14 mixing silos, from which the wheat is discharged and mixed in any required degree by means of the Cleveland Wheat Mixers, which are fitted under each hopper on the top of the distributing wheat worm, as shown in the engraving. This mixing worm delivers the wheat into another large elevator, which raises the wheat to the top of the third series of silos, called "blending" bins. From these last-named silos the wheat is discharged when required, weighed and sent to the mill proper, there to be cleaned and washed or conditioned as the wheat may require. The whole of the operation is entirely automatic and is controlled by two men.

The silos are constructed of wood, on the American plan. Each piece of wood is 5 inches by 1½ inches at the bottom and 3 inches by 1½ inches at the top, nailed flat and overlapping one another, the whole wooden walls of the silos, thus formed, having enormous strength, to resist the outward pressure of the grain in the silos. The hoppers at the bottom are of cast iron, supported in and resting on girders, which in their turn are supported by cross-girders and substantial pillars, standing on concrete foundations. The whole forms a piece of solid splendid work, which reflects great credit upon Messrs. Robinson & Sons, who may well be proud of this their latest grain silo installation.

The silos, as we have said, are 33 in number, 36 feet deep and 9 feet square, and are divided as follows: Twelve for first storage, 14 for mixing and 6 for the blended wheats, the remaining one being reserved for English wheat, which is delivered to the mill by wagon. Arrangements are also made by which the contents of each bin can be discharged, accurately weighed and sent back to the bin, which

arrangement is found very handy for stock-taking purposes.

The barge elevator shown in the transverse section is 36 feet high, and discharges the wheat at the rate of 40 tons per hour. It is, of course, arranged so that the elevator can be lowered or raised according to the quantity of wheat in the barge, the delivery of the grain being always kept at one point, viz., A. The elevator is fitted inside with two strands of strong detachable chains, having steel elevator buckets fixed thereon at regular intervals, and working over special tooth sprocket wheels. The trunk or leg has a substantial wrought-iron framing built of angle and T-iron, and fitted with the usual cross and diagonal stays, firmly braced together, the whole being inclosed in timber. All the bearings are of malleable iron bushed with steel, and all the internal shafts are of Bessemer steel. Tension gear is provided at the head of the elevator for taking up the slack in the chains, the tension screws being actuated simultaneously. Greenhart guides are fixed inside the trunk for guiding the chains and buckets both in their upward and downward course. The mouth of the elevator is carried upon wrought-iron girders, fixed on the girders of the overhanging portion of the tower. A grate of taper steel bars is fixed to the foot of the elevator, and the head is provided with lifting straps



NEW GRAIN ELEVATOR AT LONDON, ENG.—LONGITUDINAL SECTION.

for raising or lowering the same. Altogether the whole installation has been admirably carried out, without stint evidently in the matter of cost, and the Sun Flour Mills Company may justly pride itself upon possessing one of the most completely equipped grain warehouses in this country, or, for that matter, in any other country. That the firm is delighted with the work done is evidenced by the flattering testimonial which they wrote some time ago.

ONE ON THE FARMER.

"They's no use o' tryin'," declared the farmer to the dealer, of whom he had bought a grinding mill; "I kain't make 'er go. She seems to hev teeth 'nuff till she gits to goin', an' then she's a reg'lar smooth bore. Jest notis 'er," and then he began to lambaste the indolent mule that was expected to contribute the motive power.

"See thar," said he, after the sweep had made a round or two, "she skacely teches hit."

By this time the dealer was laughing heartily and the farmer soon got so blue in the face that an explosion was only averted by a few italicized remarks. When he had finished the dealer asked:

"Did it ever occur to you that you are left handed, and that you have been trying to run that machine backward?"

A small advance (5 cents a car) has been made in the fees for grain inspection in Minnesota. A note to the inspector's report says that over \$15,000 was expended for the purposes set forth in the now defunct state elevator law.

REPORT OF MINNESOTA'S CHIEF GRAIN INSPECTOR.

Minnesota's Chief Grain Inspector, A. C. Clausen, has prepared his ninth annual report to the railroad and warehouse commission for the crop year ending August 31, which is an interesting and important document.

The volume of business of the inspection department was very materially reduced from that of the preceding year, the number of carloads of grain inspected "on arrival" at the four terminal points being 30,265 less than during the year previous. The total number of cars inspected "on arrival" was as follows: Wheat, 133,628 carloads, as against 168,137 in season of 1892-93; corn, 9,939 cars, against 4,873; oats, 5,056, against 5,796; rye, 446, against 691; barley, 4,110, against 4,195; flaxseed, 2,901, against 2,653, or a total of 156,080 carloads of all kinds, as compared with 186,345 carloads in the crop year ending Aug. 31, 1893.

The inspections "out of store" during the same period were as follows: Wheat, 32,026 carloads and 20,926,482 bushels "into vessels," against 46,890 carloads and 34,228,818 bushels "into vessels" the preceding season. The total amount of corn, oats, rye, barley and flaxseed inspected "out of store" is 8,489 carloads and 1,103,887 bushels into vessels, as against 8,466 carloads and 857,317 bushels into vessels in 1892-93.

The revenue received during the year from the work of inspection was \$57,188.73 from the weighing service, \$61,610.72 from interest on deposits, and other sources \$992.70, a total of \$119,792.15. The disbursements for the same period were \$156,834.57, resulting in a net loss from the year's business of \$37,042.42. At the beginning of the crop year covered by this report the surplus on hand was \$43,754.21; at the close of the season, Aug. 31, 1894, it had been reduced to \$6,711.79.

It was clearly evident at the outset that the business of the department would be materially lessened by reason of partial crop failure, and that the expenses involved in maintaining an efficient service could not be met without either drawing upon the surplus or increasing the inspection and weighing fees from 20 to 25 cents per carload. The board deemed it more advisable to allow the existing fees to stand and to provide for any deficiency out of the surplus fund, in accordance with the intent and provisions of the grain law, which requires that the fees shall be established upon a basis which will make the work self-supporting and no more. Thus, while the results of the year's business show a severe loss to the department fund, it has been a gain to the shippers and owners of grain, in that the larger part of the accumulated surplus has been returned to the sources whence it originated.

The small balance on hand with which to commence the present crop year and the failure of the South Dakota crop rendered a slight increase in the fees inevitable, and, while the present fee of 25 cents per car will yield considerable additional revenue, it is hardly probable, in view of the limited amount of business to be expected, that the fees established will produce much more revenue than will be required for a prompt, thorough and satisfactory service.

There were 8,944 re-inspections made upon the demands of those persons interested, who deemed the original inspections unjust or incorrect. In 4,698 of these cases the original grades were confirmed on re-inspection by the chief deputy inspectors, indicating that in these cases there was no proper ground for protest against the original inspection. In 4,246 cases the grades were changed, this indicating the errors of original inspection and the variations from established standards. When it is considered that 227,250 cars of grain were passed upon by the various deputy inspectors, the small percentage of changes made in their work can be justly regarded as a very creditable showing. It also indicates a great advance in the knowledge, skill and judgment of the inspectors, when compared with the work of previous years. During the season of 1892-93 there were 8,333 changes made in a total of 241,701 cars inspected, or one in each 29 cars, while during the past season the changes were but one in each 53 cars. A work of this nature can never reach a standard of absolute perfection, but it is gratifying to note that the results of each succeeding

year's work evidence a steady improvement in the character of the service.

Of the changes made in re-inspection, 3,496 cars were raised in grade, 235 were lowered in grade, and the dockage was changed in 415 cases. There were eighteen appeals to the railroad and warehouse commission from the decisions rendered by the chief deputies in their re-inspections. Of these cases, the grade was raised on nine carloads, lowered on three and confirmed in six cases.

At the last session of the legislature a law was enacted which is designated as chapter 29, laws of 1893, entitled "a law to provide for the care and protection of grain in cars at terminal points." Under its provisions the inspectors are required to note the condition of cars on arrival, record the numbers and condition of railroad seals before breaking and after inspection to reseal such cars with state seals. This work entails considerable additional expense upon the department and the grain trade, but the results demonstrate the wisdom of the law and fully justify the additional outlay. The sealing system is in full operation at St. Paul and Minneapolis, but only incidental at Duluth, the facilities for prompt disposition and unloading cars at the latter point having, up to the present time, obviated any necessity for an application of the system. The extension of railroad yards, however, now in progress at Duluth and Superior, by which cars will be placed beyond the limits of proper police protection, will necessitate the establishment of state sealing at those points at an early day. While state seals are not an absolute protection against track thieves, there is no question but that they serve as a deterrent influence in keeping out pilferers, who, while they might enter cars which were left open or unsecured, would hesitate to incur the risk of detection and the penalties which follow conviction for violation of the state seal law.

The records of the inspection office at Minneapolis showed that many cars arrive in bad condition with seals broken, open doors and leaks.

This is a partial indication of some of the possible causes for differences in weights between country and terminal points. No doubt in many instances seals are broken and doors opened by unauthorized persons after the cars have reached the terminal point and before the inspector commences his work. The large number of end doors found open demonstrates quite clearly that this is the favorite method of gaining access to the car on the part of the track thieves, they being, in this way, more secure from observation by inspectors and watchmen along the tracks. More care on the part of shippers in securing the end doors by fastening the inside bolts will serve to decrease these opportunities to pilfer without detection.

The number of leaks discovered is very small in comparison with the large number of cars handled. Leaks are found in any portion of the cars, the most common location being at the side and end doors, the center pin and draw bar. Many losses in transit occur from overloading and uneven loading of grain, in many of such cases it being jolted during switching out of the side and end doors. Failure to fasten down the side doors and careless cooping of cars is also a frequent cause of shortages.

Out of a total of 78,448 cars of spring wheat inspected at Minneapolis during the season, 8,965 cars were subject to a dockage of one-half pound per bushel; 28,765 cars were docked one pound, 17,885 cars one and one-half pounds, 9,739 cars two pounds, 2,426 cars two and one-half pounds, 2,147 cars three pounds, and 2,042 cars over three pounds and at an average of four pounds, being a net average of twenty-one and one-half ounces per bushel on all cars subject to dockage. On 6,479 cars there was no dockage imposed.

At Duluth and Superior out of 52,759 cars of spring wheat received, 9,113 cars were docked one-half pound per bushel, 19,674 cars one pound, 12,261 cars one and one-half pounds, 5,720 cars two pounds, 2,150 cars two

and one-half pounds, 1,346 cars three pounds, and 1,645 cars over three and at an average of four pounds; being a net average dockage of twenty-one and one-half ounces per bushel. On 860 cars there was no dockage.

The net average dockage at all terminal points was twenty-one and one-fourth ounces per bushel. Of the 7,339 cars at all points on which no dockage was imposed, 1,389 cars were grade wheat which was cleaned before shipment sufficiently to pass inspection without any reduction, while 5,950 cars were classed as "rejected" or "no grade," on which it is not customary to fix dockage, such grain being forced upon the sample tables, where it sells upon its actual merits, and all allowances are a matter of agreement between seller and buyer.

One of the most important and beneficial acts of legislation in the interests of the producers of the state was placed upon the statute books at the last session of the legislature, and is known as chapter 28, laws of 1893. It provides for the regulation of the business of receiving, storing and shipping grain at elevators and on the right of way of railroads in this state at country stations and sidings. Up to the time of its enactment the only statute in force was the act of March 5, 1885,

burden and expense of so cumbersome a system, was dismissed as impracticable. With this feeling of doubt and uncertainty on the part of the several legislatures as to what legislation would be most effective and remedial, the existing law was left untouched.

It has always been the sincere belief and conviction of those charged with the execution of the grain laws, that the methods pursued at the interior points were, as a rule, fair and honest and in accordance with terminal standards; that cases of dishonesty and injustice were incidental, not the general rule; that ignorance, inexperience, defective scales, careless and slipshod methods were responsible for fully as much of the alleged injustices as were evil and dishonest intentions; that what was needed was not an army of inspectors to regulate the business, but simply some measure of legislation which would afford a remedy for such irregularities and evils as might from time to time be complained of, leaving that portion of the business which was being properly conducted free and untrammelled.

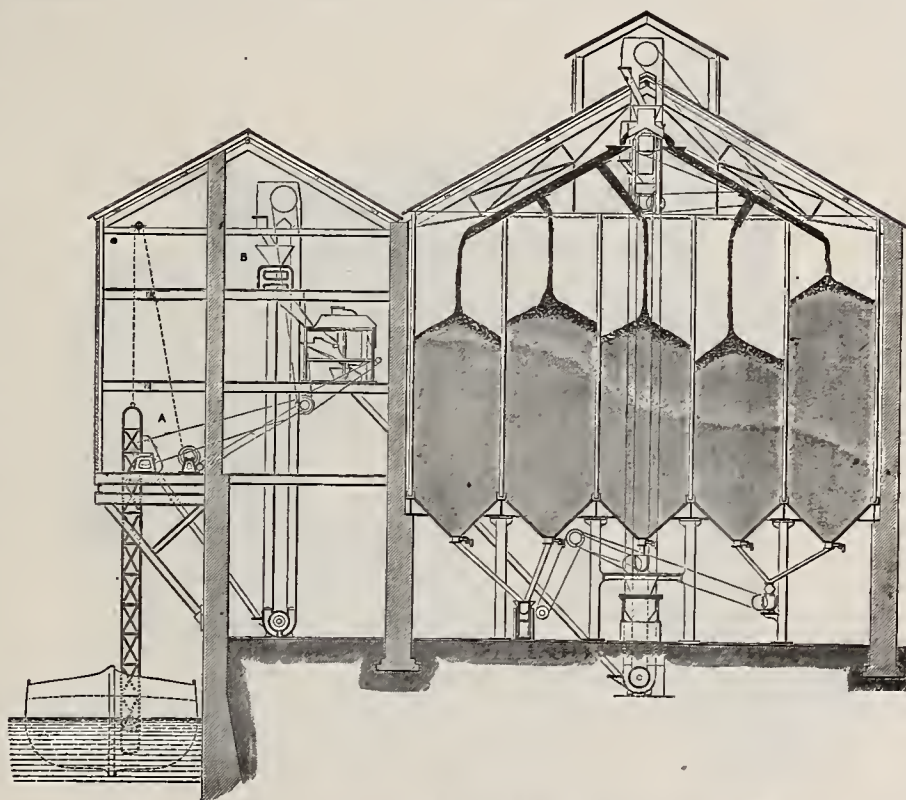
Such legislation was recommended to the legislature of 1887, and at each subsequent session, but without avail until the legislature of 1893, upon the urgent recommendation of your honorable board, reinforced by the strong efforts of his excellency, Gov. Nelson, enacted the "Country Warehouse Law." It embraces all of the suggestions heretofore outlined, with many additional features, some of which are of great value and utility. One of the most important provisions affecting the duties of the state inspection department is found in section 5. Under this section disputes or disagreements as to grade which may arise between the country buyer and seller can be referred to the chief inspector of the state, who is required in such cases to determine from the sample submitted what the quality or grade of the grain would be if shipped to the terminal points in car lots and subjected to state inspection. As the law requires that the inspection at country points shall conform with the standards at terminal points, it will be seen that by this method of arbitration there is left no valid excuse for ignorance of standards or for injustice in grading at country markets.

During the past crop year a large number of samples have been submitted to the state inspection department under this provision of law, and the decisions rendered have been the means of settling a corresponding number of controversies, the parties involved having mutually agreed to abide the judgment rendered. In its practical workings the law has proved eminently successful, and, as it becomes better known and appreciated, more will avail themselves of its privileges.

The falling off in the volume of business during the past crop year rendered a curtailment of expenses necessary where it could be accomplished without injury to the service. The force was gradually reduced from Jan. 1, 1893, until the close of the season. An investigation of the record of movement of Northwestern crops to the terminal markets during the past twenty-eight years discloses the fact that over 50 per cent. of the crop, exclusive of bread and seed, finds its way to the terminal points prior to January 1 of each crop year, or, in other words, over one-half of the crop is handled during September, October, November and December, the balance of the receipts being distributed over the remaining eight months of the season.

This heavy movement during the early part of the season necessitates the employment of a larger force than is needed after the rush is over. In all twenty-eight employes were dropped from the roll during the dull season, with the assurance that they should be reinstated when business became sufficiently large to warrant it.

The average number of persons employed throughout the season at the four terminal points was 129; classified as follows: One chief inspector, four chief deputies, two first assistant deputies, eighteen depu



NEW GRAIN ELEVATOR AT LONDON, ENG.—TRANSVERSE SECTION.

known as the "warehouse and grain law," the provisions of which applied only to the business of inspecting, weighing and handling grain at terminal points. The object of the act of 1885 was to secure justice to the grain growers and shippers of the state. Its effect has been to establish and maintain a fair, uniform system of inspection at the terminal points, and a careful, accurate system of weighing. It was confidently expected that under such a system the honest country buyer would fix his grades in conformity thereto, and thus the producer, marketing his grain at the local station, would receive in return fair and honest treatment. While this expectation has been realized to a large extent, it was long a mooted question whether the terminal law was adequate to properly protect the farmer against impositions and dishonest practices at the country points, where nine-tenths of his grain left his possession. It had long been a common and frequent criticism that the terminal law protected the wheat buyers and dealers, but not the farmer. To a certain extent this was true, as only those farmers who loaded their grain into cars and consigned it to the terminal points enjoyed directly such advantages as official inspection afforded, the rest being still left subject to such treatment as the country buyer might choose to extend. That there was some ground for dissatisfaction and an apparent need of farther legislation was generally understood and conceded. The difficulty lay in determining the remedy. The proposition to extend the terminal inspection system to all the interior points was strongly advocated, but after considering the hundreds of officials that would be necessary, the difficulty in maintaining a proper supervision, and the

ties, seven sub-deputies, and fifteen helpers in the grain inspection department. In the weighing department: Four state weighers, sixty-one deputy weighmen, one scale expert. In the registration department: One warehouse registrar and two assistant registrars. In addition there are eleven clerks and two stenographers in the various branches of the department.

EXPERIENCE WITH AMERICAN ELEVATORS IN RUSSIA.

NO. III.

BY ALFRED F. BENDER, ENGINEER, ST. PETERSBURG.

At the time of the issue of the pamphlet on elevators in Russia, quoted in previous articles, the Charkoff-Nicholajeff Railroad was completing an elevator at Nicholajeff, a Black Sea port near Odessa. Its cost was estimated at 800,000 rubles, but amounted to about 1,000,000 rubles, or \$500,000. In arrangement and general construction it is an exact copy of an American elevator, and has facilities for cleaning and grading grain. It consists of two buildings of equal size of a capacity of 160,000 chetverts (of 5.9567 bushels each) aggregate capacity, which is one-sixth to one-seventh of the average annual amount of grain received at Nicholajeff, or one-sixteenth of the maximum amount received in 1888. In reality, its total storage capacity reaches 190,000 chetverts, there being 190 bins of 436 chetverts each and 10 bins of 340 chetverts each in each building.

The elevator is located on the quay and grain can be discharged into the holds of vessels by means of three discharging tubes. Each of the buildings can load 18 or unload 12 cars per hour. The services of this elevator are applied for by grain exporters exclusively, and that, too, at times of lively demand for grain for foreign markets, and when the grain is not likely to remain in store at the port for too long a time. Owing to the recent completion of the elevator, and its activity having begun but a short time since, there are as yet no statistics available.

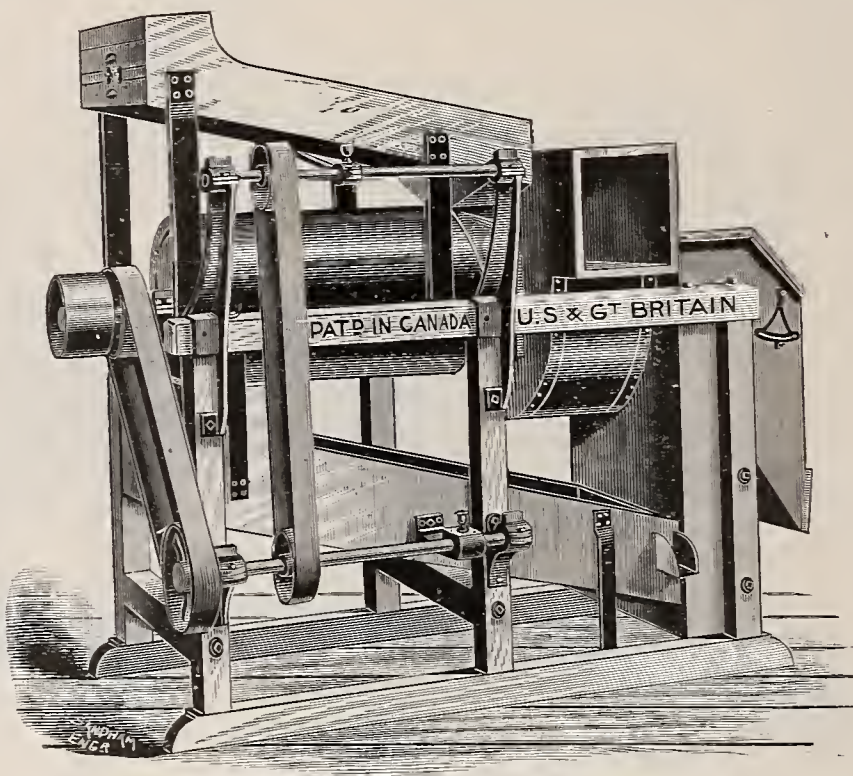
During the first year of its activity the elevator was expected to accomplish three business cycles (one in spring, February-May, and two in autumn, August-November), during which time it was to be filled, in accordance with the first estimates, on an average of 40 per cent. of its storage capacity, or 760,000 chetverts. During the rest of the time there would have been but 190,000 chetverts of grain stored, only 10 per cent. of the full capacity. In other words, there would have been about 2,500,000 poods (1,500,000 bushels) of grain run through the elevator during the first year. According to these estimated figures there ought to be for the first year a gross receipt valued at 115,340 rubles (\$57,670), against an estimated expense of 92,498 rubles (\$46,249), the difference showing a surplus of 22,842 rubles (\$12,421). This, however, seems to be more like a pleasant chimera when we consider the results of our experience with other Russian elevators. The expenses for the year (1893) have been intentionally reckoned as low as possible, and the management of the railroad, on being asked to appropriate the necessary amount of money, cut the amount down to \$18,630.

Like other Russian elevators, the one at Nicholajeff receives grain by rail or otherwise, weighing it on receipt and before shipping. It spouts the grain to bins, airing it if necessary and cleaning it only on request of the owner. It loads the bulk grain into vessels or cars, and bags and ships grain to destination. Empty bags are kept on hand for rent. The grain received by the elevator is insured against fire by the railroad and pays a high insurance premium of 9.15 copecks per pood, about .0457 cents per 36 pounds.

All the grain entering the elevator, whether for separate keeping or mixing and thereby losing its identity, is inspected by a grain inspector, who decides upon its quality in accordance with the rules for the survey of grading in operation at the elevator. If subjected to grading grain is accepted by the eleva-

tor in any quantity desired and a storage fee per pood charged. If not graded, certain restrictions are made with reference to both quality and quantity of grain tendered. The shipments must be equal in quality and not exceed in volume the capacity of one bin. That is, wheat and corn is accepted in shipments of no less than 3,000 poods, or about 1,800 bushels: rye, barley, buckwheat and oleiferous seeds in quantities of no less than 2,400 poods, and oats no less than 1,800 poods. However, in case of the grain owner being willing to bear the charges for the full capacity of bins but partly occupied by his grain it will be accepted for storage in any quantities, in which case it is charged (quite regardless of whether the length of time of storage was agreed-upon) an adequate fee for every fortnight or part thereof. In no event could it be kept longer than six months.

The locating of such a large elevator so near Odessa, where is already a big elevator, and an unprofitable one, too, must be considered as too hasty a step, inasmuch as Nicholajeff as a port is far from equaling Odessa in importance, and is still less fit for insuring a prosperous existence to an elevator. Besides, there are elevators being built at Riga, at Reval of the Baltic Railroad and an enormous one of 300,000 chetverts' storage capacity at Novorossisk on the Black



LAIDLAW'S IMPROVED BARLEY CLEANER.

Sea. It should be mentioned, also, that a private concern, Behrend & Riege, erected at Libau in 1890 an elevator-like granary to accommodate their steam flouring mill. This house has an aggregate storage capacity of 150,000 chetverts, or 720,000 bushels, and is fitted out with norias and other mechanical appliances for receiving and discharging bulk grain. Grain is stored there in bulk and bags, each shipment separately. The total cost of the whole establishment is said to have been very low, \$100,000; but owing to the house being in the concern's private use only, there are no data allowing of a judgment or criticism of the results.

Among all our inland elevators we could not find a more fortunate and prosperous one, even if applying to the stock of their family, than the first Russian elevator which sprang into existence at Yeletz in 1880. It was built by the Briansky Rail and Iron Works, contractors, and is said to have cost 135,000 rubles, although contracted and paid for at 79,000 rubles. It is a wooden building, faced with corrugated iron. The bins have a storage capacity of 40,000 chetverts, or 240,000 bushels. Considering that there have been additional expenses, such as those in connection with the acquisition of the site, investments in machinery and outfits, etc., and that almost yearly, too, since the erection of the building, the terminal cost must be valued at a still higher figure. From 1887 to July 1, 1892, such expenditures were as follows: Constructing and fitting out the elevator, and for the purchase and placing of machinery, providing with mechanical appliances, flouring mill, etc., 27,517.75 rubles in 1887, 71,421.94 in 1888, 8,760.94 in 1889, 5,819.75 in

1890, 10,662.91 in 1891, and 3,862.17 to July 1, 1892, a grand total of 128,054.46 rubles.

Out of the money appropriated by the municipality for the construction of the elevator 95,000 rubles were obtained through the mortgaging of a part of the capital stock of the Ord-Wittebsk municipal railroad, the balance having been covered partly by ready money from the municipal treasury and partly out of a surplus economized on the municipal budget.

The elevator started up Sept. 28, 1888, and worked without interruption; yet there was no development or increase of business from year to year, as will be seen from the following figures, which show the regular business transacted: The amount of grain received from Sept. 28, 1888, to December 31 was 244,087 poods; in 1889, 576,391 poods; in 1890, 1,090,116 poods; 1891, 1,223,687 poods, and to July 1, 1892, 286,594 poods of private goods; commonwealth goods of the Yeletz municipality amounting to, in 1891, 611,664 poods; to July 1, 1892, 380,188 poods, making a grand total of grain received from 1888 to 1892 of 4,412,676 poods. For the same periods of time the shipments were, in 1888, 57,659 poods; 1889, 544,647 poods; 1890, 1,058,698 poods; 1891, 1,097,292 poods; 1892, 544,018 poods in private goods; while commonwealth goods of the Yeletz municipality amounted to, in 1891, 302,417 poods; 1892, 654,856 poods, the total amount of grain shipped being 4,259,590 poods.

LAIDLAW'S IMPROVED BARLEY CLEANER.

A. Laidlaw & Co., manufacturers of improved grain cleaning machinery at Toronto, Canada, are making an improved barley cleaner which they claim is indispensable to grain dealers, brewers and maltsters.

The operation of Laidlaw's Improved Barley Cleaner is as follows: The grain is received on the shoe or shaker at the top, and all foreign substances larger than the berry removed. The barley then passes to a cylinder, where it is treated by a series of revolving beaters, cleansing the grain of dust and other impurities. These separated impurities are carried away by a strong suction blast generated by the fan. The grain then enters a second shaker and undergoes a further purification.

Leaving the second shaker the grain is discharged into an air trunk, where a strong current of air separates all light and

inferior grain and any remaining impurities. The lighter impurities, such as dust, etc., are blown away while the heavier are discharged by themselves.

Subjected to this process the barley leaves the machine in a purified condition. A machine that embraces all the requirements necessary for the thorough cleaning of barley will scour and brighten the berry in such a way that there will be a minimum reduction in the weight of the grain, but yet removing all the impurities that would be detrimental to its appearance and quality. The scouring process of Laidlaw's Cleaner is effective, yet gentle, and the germ of the grain is left uninjured.

These machines are built with the best materials. Every part is interchangeable and duplicated. All shafts are steel and the journals are of easy access. The machines are made in four sizes, of different capacities.

Rice is the principal diet of almost all Eastern nations, and its consumption is constantly increasing. The Burmese and Siamese are the greatest consumers of it. A Malay laborer gets through 56 pounds monthly, a Burmese or Siamese 46 pounds in the same period. The Eastern nations also chiefly obtain their beverages from rice, which is the principal grain distilled in Siam, Japan and China. Saki, or rice beer, is produced in Japan to the extent of 150,000,000 gallons annually. The yield of rice is five times as heavy as that of wheat, the two crops yearly giving from 80 to 100 bushels per acre. India not only raises enough of this grain for 200,000,000 people, but exports 1,000,000 tons every year.

THE PRODUCTION AND CONSUMPTION OF RICE IN THE UNITED STATES.

NO. III.

The New York *Shipping and Commercial List* Jan. 24, 1894, quotes the testimony of a prominent citizen of New Orleans, "who in 1886 asserted that 'rice can be produced and profitably sold at 3 cents per pound, cleaned, in New Orleans,' and, as if to emphasize the statement, added: 'I speak not only as a factor and commission merchant, but also as a planter. By my business relations I know what other men can do, and by reason of being a planter I can testify from personal experience.'"

It will be remembered that Dr. Knapp puts the price at which rice should sell in New Orleans to afford a reasonable profit at a little more than \$2 per sack of 162 pounds of rough rice; and as he elsewhere assumes this to represent 100 pounds of merchantable rice, we may take his estimate for the cost of cleaned rice as being equivalent to a fraction over 2 cents a pound, plus the cost of milling and of the additional handling incident to that process. What the minimum cost of milling is it would be difficult to ascertain, because in the best equipped mills the process is performed in part, at least, by new machinery, the character of which is kept secret. It is stated, however, that machinery which removes both the husk and the inner pellicle, thus dispensing with the separate use of the mortar and pestle for the removal of the latter, will clean 35 bushels of rice per hour; and under such circumstances it would seem that the average cost per pound of cleaned rice incident to the milling process must be a very minute fraction of a cent. So long as improved machinery is not generally available the public cannot expect to share fully in the economies incident to its use, but the interests of those who control it will dictate a reduction of their charges as fast as the resulting extension of their business will suffice to convert the loss so incurred into a larger gain.

While there is no probability that the cost of pro-

with the consumption in regions where rice is the principal article of food. Official figures for Japan for the five years 1887-1891 indicate an annual average of 308½ pounds per capita; and Watt in his Dictionary of the Economic Products of India, puts the consumption per capita in Bengal and the Central Provinces at about 1 pound, and in the presidency of Bombay and Sind at 1½ pounds per diem. Still higher figures are given for Burmah, but with an intimation that their trustworthiness is impaired by several sources of possible error. The average daily consumption in Assam is put at somewhat over two-thirds, that of the northwest provinces and Oudh at somewhat more than three-tenths, and that of the Punjab at about one-twelfth of a pound. Reducing these daily averages of consumption per annum we get the following results: Annual consumption per capita, Punjab, 30.4; Northwest Provinces and Oudh, 109.5; Assam, 243.3; Bengal and Central Provinces, 365; Bombay and Sind, 547.5 pounds.

If these higher figures are not in excess of the true consumption, the question suggests itself whether they do not include some rice used as food for domestic animals. That some rice is so used is recognized by Watt in his discussion of the consumption in Bengal, but his estimate of 1 pound per capita for that presidency appears to be intended to cover only the rice used for human food, after deducting exports, seeds, etc., from the total estimated production.

Although the consumption of rice in the Punjab, the chief of the wheat-growing provinces of India, is not quite one-twelfth part as great as in Bengal, it is still nearly eight times as great as in the United States. From this we may see how wide is the margin for increased consumption of rice in our own country, under the influence of diminished cost or other causes, without any approach on the part of this cereal to a serious competition with wheat for the position of principal food grain.

The following table gives the figures as to production, imports and exports of rice, from which our average consumption per capita for the five fiscal years, 1888-1893, as above stated, has been calculated:

TABLE III.—CONSUMPTION OF RICE IN THE UNITED STATES DURING THE FIVE FISCAL YEARS ENDING ON JUNE 30, 1893.

Years Ending June 30—	Crop of the United States.*	Imports.		Exports.			Remaining for Domestic Consumption.
		Free of Duty.	Dutiable.	Domestic.	Foreign, Free of Duty.	Foreign, Dutiable.	
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
1889.....	124,733,200	10,660,300	121,495,663	439,706	19,000	8,304,324	248,126,133
1890.....	128,590,934	10,730,600	57,631,397	388,914	23,300	6,581,315	189,959,402
1891.....	136,750,000	7,840,900	125,263,163	340,620	5,317	8,114,257	261,393,869
1892.....	155,665,600	7,489,700	77,622,464	445,000	14,500	10,577,423	229,735,841
1893.....	237,546,900	8,473,800	72,558,144	756,992	59,500	10,811,072	306,951,280
Total.....	738,286,634	45,195,300	454,570,831	2,376,232	121,617	44,388,391	1,236,166,525

*As the rice crop is harvested in the latter half of the calendar year the crop of the fiscal year ending June 30, 1889, was, of course, that of the calendar year 1888, and so on for the other years. The figures given for 1889 (fiscal year ending June 30, 1890) are those of the census. Those for the other years are the estimates used in Table II.

†The official report on our foreign commerce for 1892 does not give the exports of cleaned rice separate from those of rice bran and rice polish, and the figures here given are, therefore, only a roughly approximate estimate.

ducing rice and preparing it for the market will be so far reduced as to endanger the position of wheat as our staple food grain, there is a wide margin within which the consumption of the former cereal may be enlarged without involving any radical change in the dietary habits of the people. Our present annual consumption, measured by the statistics of production and trade for the five years, 1888-1892, is not quite 3.9 pounds per capita, as against 3.8 pounds in France, 3.9 pounds in Germany, 9.6 pounds in Great Britain and Ireland and 13.7 pounds in Italy.

None of these are countries in which rice approaches the position of a staple food; yet the consumption of rice is, in the United Kingdom, nearly 2½ and in Italy over 3½ times as great as in the United States. An advance on the part of the United States to an equality with the United Kingdom in this particular would, with our present population, create a home demand for over 650,000,000 pounds a year, or about three times the amount of our largest crop; and should our population continue to increase at its present ratio, the demand by the year 1900 would amount to nearly 750,000,000 pounds.

The highest consumption per capita in any of the countries named above is insignificant in comparison

If the total amount remaining for consumption for the five years (1,236,166,525 pounds) be divided by the total population (317,287,250) obtained by adding together the figures as to estimated population for the middle of each fiscal year, the result obtained is not quite 3.9 pounds per capita, as already stated. There is good reason to believe, however, that our actual production and consumption are a little larger than the above figures indicate, as a limited quantity of upland rice cultivated for the consumption of the growers fails to appear in the commercial movement of this product and is consequently not included in the ordinary commercial estimates. Moreover, it is a recognized fact that, even in the census, those returns as to any crop which come from districts in whose husbandry it occupies only a subordinate and relatively unimportant place are apt to be much less complete than those from districts in which it is cultivated as a staple.

The Illinois Central Railroad is reported as having had in November what was probably the greatest run of freight business it ever had at that time of year. When Central Illinois began to market its wheat the road was continually behind in orders for cars.

CHAFF.

Farmers in the vicinity of Champaign, Ill., claim that there is a disease among their hogs due to wheat feeding.

Arkansas stockmen complain that at present prices of cottonseed meal and hulls they are unable to make anything by feeding cattle.

Read the AMERICAN ELEVATOR AND GRAIN TRADE and the *Hay Trade Journal*, weekly. Grain and hay markets reported. Both papers one year for \$2.

Cedar County, Mo., is said to have raised an immense crop of corn this year. The crop on some farms has sold for \$15 per acre, more than the land itself would sell for.

Experiments are being made at Anoka, Minn., to test the starch-making qualities of sweet potatoes, and if results prove as expected it will be as good as a gold mine for the South.

An English farmer recently brought suit against the proprietors of a factory to recover the value of damages to his crops by smoke from the factory chimney. The court awarded him £7.

Webb's golden grain barley secured the first and several other prizes at the recent Brewers' Exhibition in London, England. The sample was grown by Webb & Sons, seedsmen of Wordsley, Stourbridge.

Wheat swindlers are fleeing Illinois farmers. They exhibit a fine specimen of wheat, claiming that it is superior in quality and that it will produce 50 or 60 bushels to the acre. They get their victim to sign a contract giving them one-half of the first year's crop. This contract invariably turns out to be a promissory note.

It is said that four counties of Illinois raised about one-half of the broom corn crop of the nation. The yield this year is a short crop, and the sales are running from \$70 to \$120, or an average of about \$90 a ton. This is nearly double the price of last year. A consignment of 28 straight carloads, aggregating nearly half a million pounds, was recently received in Canada.

Some interior grain dealers recently brought suit against a Toledo concern to recover losses incurred through grain speculation on the Produce Exchange. The suit resulted in the court sustaining the validity of trading on 'Change. Such decisions should be supplemented by a reprimand to those who are willing to take the profits on a deal they order made and who crawlfish into trying to recover if they lose.

According to the report of W. D. Charde, secretary of the Kansas City Commercial Exchange, receipts at that city for the four weeks ending December 1, as compared with the receipts during the same time in 1893, were: Wheat 421,200, against 1,174,800 bushels; corn 1,136,200, against 1,224,600 bushels; oats 174,000, against 263,000 bushels; no barley; rye 1,800, against 13,800 bushels; flaxseed 4,200, against 13,800 bushels; hay 6,880, against 4,800 tons.

The monumental gall of W. H. DeCarlow of Sacramento, Cal., is something wonderful. DeCarlow went to the Phoenix Mill to sell some grain. There was a sack of rye in the lot which J. H. Arnold, the superintendent, recognized as his own property, and as a large quantity of grain has recently been stolen from cars, Mr. DeCarlow was arrested on the charge of theft. He gave several accounts as to how he got the grain, without mentioning that he stole it. He was held in bonds of \$1,000.

It is curious to notice how the principal source of the United Kingdom's wheat supply has shifted within the last few years. Thus, while the wheat from the Atlantic Coast of America was reduced quite a third when compared with the previous two years, the supplies from southern Russia and Argentina have been doubled, and if the imports of wheat from the latter country for last year be compared with the imports of three years ago they show an increase equal nearly to five times the amount of the latter year. Thus, in 1891-92 the quantity received from Argentina was 529,000 quarters (of 480 pounds each), while in the year 1893-94 it is 2,436,900 quarters. In the same period the import of wheat from India has fallen off more than half.

A COMMISSION MAN'S THANKS-GIVING.

We're truly thankful for our lot,
As doubtless we should be,
But if some things were which are not
How thankful we would be.
If all the kickers would keep still,
And every debtor paid his bill,
And orders came too fast to fill,
How thankful we would be.

If margins always were kept good
How thankful we would be.
If shippers drew for what they should
How thankful we would be.
If these dull markets, like a kite,
Would rise and soar clear out of sight
Without the aid of dynamite,
How thankful we would be.

—From Zahn's Circular.



[We invite correspondence from everyone in any way interested in the grain trade, or all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

ENGINE AND PLANS FOR ELEVATOR WANTED.

Editor American Elevator and Grain Trade:—We would like to communicate with parties who can furnish us with plans for an elevator, as we intend to construct one in the spring; also with parties manufacturing gas engines and feed mills. Send us the AMERICAN ELEVATOR AND GRAIN TRADE for one year.

Yours truly, L. C. HOUGH & SON.

Plymouth, Mich.

DESTRUCTION OF A MISSOURI ELEVATOR.

Editor American Elevator and Grain Trade:—The Aullville Elevator at Aullville, Mo., operated by John S. Klingenberg, was destroyed by fire on the night of November 18, together with the contents, about 4,000 bushels of wheat and one freight car loaded with wheat. The elevator and contents were partially insured. The fire started in the railroad depot, which was also destroyed. The wheat was a total loss. The cause of the fire is unknown.

E. W. K.

WESTWEGO ELEVATOR NOT BURNED.

Editor American Elevator and Grain Trade:—In the November issue of the AMERICAN ELEVATOR AND GRAIN TRADE, under the head of "Fires, Casualties, Etc.," is recorded the destruction by fire on the night of November 12 of the Texas & Pacific Elevator at Westwego, La. This is an error. The Texas & Pacific cotton wharves adjoining the elevator were destroyed, but the elevator suffered no damage whatever. Kindly make correction in your next issue and oblige

Yours truly, GEO. W. ROTH,
New Orleans, La. Superintendent.

SHIPPING AT TACOMA.

Editor American Elevator and Grain Trade:—According to the report of the harbor master of the port of Tacoma, Wash., for the month of November, the total exportation of breadstuffs was as follows: Wheat, foreign, 512,290 bushels, valued at \$254,416; wheat, coastwise, 464,866 bushels, valued at \$185,946; China, flour, 31,015 barrels, valued at \$68,642. The inward registered tonnage was 54,389 tons, outward registered tonnage 58,611 tons; inward cargoes amounted to 5,640 tons, outward cargoes 69,610 tons.

SAMUEL COLLYER,

Secretary the Tacoma Chamber of Commerce.

• Tacoma, Wash.

A GOOD RECORD.

Editor American Elevator and Grain Trade:—The accompanying excerpt is from the Decatur Herald. Can any country elevator beat that record? The amount of grain was handled from sun-up till 6 o'clock P. M.:

"At the Shellabarger elevator in Cerro Gordo one day recently G. H. Moore, the company's agent, received 11,485 bushels of all kinds of grain, principally corn, in one day. This is the heaviest business the company ever did at one of their country stations. At

Milmine one day last fall at the Shellabarger elevator there was received 9,000 bushels of grain, and that was regarded as almost phenomenal. It is likely that that day's business at the Cerro Gordo elevator is as heavy as was ever transacted at a country elevator in the state of Illinois."

Yours respectfully, GEO. H. MOORE.
Cerro Gordo, Ill.

CHANGE IN GRADES AT PHILADELPHIA.

Editor American Elevator and Grain Trade:—At a meeting of the grain committee of the Commercial Exchange of Philadelphia, held Dec. 3, 1894, the following resolution was unanimously adopted:

Resolved, That the grade "Ungraded" on wheat and oats be abolished and in place of it to substitute grades of "No Established Grade" on corn, wheat, oats and rye.

"No Established Grade" admits in it all sound grain that may, from any cause, be barred out of the regular sound grades.

The above to take effect on and after Dec. 15, 1894.

Very respectfully, JOHN O. FOERING,
Philadelphia. Chief Grain Inspector.

OPENING FOR ELEVATOR.

Editor American Elevator and Grain Trade:—I wish to call attention to this point as an especially fine location for an elevator. Orlando is situated on the Atchison, Topeka & Santa Fe Railroad, three-fourths of a mile south of the Cherokee strip, 70 miles south of Arkansas City and 20 miles north of Guthrie, Okla., in the midst of a wheat country. In the near future the town will be a wheat center.

Last year and the year before the trading radius of Orlando produced, after allowing 100 bushels to every quarter section, or 400 bushels to the section, for seed and bread, over 300 carloads of surplus wheat. The strip country on the north is being settled, and will give us from four to six miles more trading radius. Our shipping surplus will then be doubled or more. We have no grain elevator as yet and deem this a golden opportunity for grain men to establish an elevator for the next crop. A new flour mill will soon be erected and doing business.

There is not a point on the Santa Fe line in Oklahoma Territory that offers better remuneration in the future or that promises a greater percentage for money invested than Orlando.

Yours truly, D. H. WALKER.
Orlando, Okla. Ter.

GRAIN DEALERS CAUGHT IN AN INDIANA FAILURE.

Editor American Elevator and Grain Trade:—The failure of a certain firm in Indiana caught a number of grain dealers near this place. When last season's good wheat harvest was assured this firm sent out runners over the country with the statement that they would furnish all sacks needed for grain, give storage room for 100,000 bushels of wheat free and pay Toledo prices for same.

When threshing time came wheat began to roll in at the rate of 2,000 to 3,000 bushels per day, and as prices went down this company advised farmers to hold their wheat, as it was sure to advance 10 to 15 cents before November. Meanwhile the company shipped or ground the wheat as fast as it came in, sometimes five carloads a day.

When the rush of grain was over they began to buy from dealers in carload lots, and succeeded in getting about 12,000 bushels, which was switched to their side track, rebilled and a draft made on it. In a last transaction they bought six carloads of about 800 bushels each, took the bills of lading to Toledo, sold same to arrive and took a \$2,500 New York draft for payment on same.

When this transaction was finished the firm announced their failure. They turned their books and accounts over to their attorney, who claims that they have been assigned to him. The business is now being conducted by the owner of the mill. He bought the property and formed the company, claiming he had sold out to the former firm and now took back the unexpired lease and what little grain was left in the mill, having taken it to satisfy his claims against the company. No notice of the dissolution of the company or of his retirement from it had been made public.

Two members of the company have been arrested

under the embezzlement act and are now in jail. There are a matter of 50 or 60 more charges besides that of embezzlement.

PORTLAND.

ANOTHER COMPETITOR FOR THE WHEAT TRADE.

Editor American Elevator and Grain Trade:—Judging from the following letter, America will have another competitor for the wheat trade of importing countries. It is from the general manager of a new railway there, inquiring into the latest method of constructing grain elevators and grain cars. The letter is as follows:

CAPE TOWN, Nov. 9, 1893.—*M. Berliner, Esq., New York*—SIR: I have the honor to state that during the past few weeks a series of articles have appeared in our local newspapers having reference to the granaries of America, particular allusion being made to grain elevators stated to be in use at roadside stations and to cars of special construction for the conveyance of grain, the latter being stated to cost for construction from \$400 to \$500 each and to have a carrying capacity of 700 bushels of grain. I have to ask that you may be so good as to obtain any information you may be in a position to procure on the subject, and also the method adopted in the construction of trucks for preventing the grain dropping through the interstices. I have the honor to be, sir, your obedient servant,

C. B. SWIFT,
General Manager.

As far as corn is concerned, America is all right. There is no other country that can compete with it, because they can't raise it, but the increased production of wheat through the opening of new territory in eastern countries is going to make the price of wheat very low.

M. T. BOWERS.

OUR BOSTON LETTER.

Editor American Elevator and Grain Trade:—Business has been very good lately, especially in feed. The cold weather has brought on a heavy consumption of feed of all kinds. Markets are higher than a month ago. Old corn has been well used up, and it is hard to find any in Boston or at the junction points. New corn does not seem very plentiful near by.

Receipts and exports for the month of November, 1894, as compared with those of the same time in the preceding year were as follows:

RECEIPTS FOR NOVEMBER.

Articles.	1894.	1893.
Cotton Seed Meal, busbels.....	1,175	300
Corn, bushels.....	565,912	1,428,155
Wheat, bushels.....	278,317	1,026,373
Oats, bushels.....	898,460	641,276
Rye, bushels.....	675	2,350
Mill Feed, tons.....	4,535	4,545
Oatmeal, sacks.....	385	1,267
Oatmeal, barrels.....	10,271	6,094
Cornmeal, barrels.....	4,420	12,638
Malt, bushels.....	89,911	99,796
Barley, bushels.....	68,533	17,235
Hops, bales.....	1,965	2,351
Peas, bushels.....	6,952	6,252
Buckwheat, bushels.....	.....	8,998
Flour, barrels.....	165,551	131,279
Flour, sacks.....	274,572	210,967
Hay, cars.....	1,278	2,502
Straw, cars.....	139	2

EXPORTS FOR NOVEMBER.

Articles.	1894.	1893.
Wheat, bushels.....	304,623	255,832
Corn, bushels.....	196,762	719,419
Oats, bushels.....	12,184	6,655
Peas, bushels.....	1,481	300
Barley, bushels.....	183	.....
Buckwheat, bushels.....	.....	.....
Cornmeal, barrels.....	2,283	9,123
Oatmeal, barrels.....	2,510	1,497
Oatmeal, sacks.....	435	949
Flour, sacks.....	183,752	153,477
Flour, barrels.....	44,876	43,112
Mill Feed, bags.....	16,169	8,433
Hay, bales.....	9,479	97,305
Straw, bales.....	.....	455

Mr. Eugene McDonald, formerly with R. Williams & Co., and Mr. Earle H. Johnson, formerly with E. C. Paull, have formed a copartnership under the firm name of McDonald & Johnson, to do a grain and feed brokerage business.

J. P. O'Toole, for the past seven years with John Bingham, has gone into business for himself, with an office in the Chamber of Commerce, to do an export grain and freight brokerage business.

Rodney T. Hardy of R. J. Hardy & Son, Boston, was married November 14 to Miss Annie Walker

of Dorchester, at his father's home, in Arlington, Mass.

J. E. Southworth of the firm of A. Fred Brown was married December 6 to Miss Edith Hoxie of Boston.

BUNKER HILL.

SOLICITING DIRECT SHIPMENTS FROM FARMERS.

Editor American Elevator and Grain Trade:—I enclose a clipping from a farmers' journal published in the Northwest, which shows that you have a man in your town who is attempting to teach the spring wheat growers how to ignore the local buyer. I have never shipped to Chicago, and until to-day harbored no ill will against any dealer on that market, but now I have a long black mark against the man who is trying to prejudice the farmers against the country dealers, by assuming that all the country buyers are guilty of all the charges it is possible to raise against all engaged in the business. Although I have never met the man, I feel very grateful toward him for the striking picture he has painted of me as a grain buyer with stubby horns and spear. It is a wonder to me he has never run against any of the buyers when they were in a mood to spear him. I take the following from his letter:

The secret of success in farming is not alone to raise big crops, but to secure the most possible for what they do raise. It requires good business judgment to succeed at farming as well as it does in any other business.

We are striving to show the producer how he can reach the consumer with as few middlemen between as possible. Property consigned to a strictly commission house is sold on the market for the highest possible price to be obtained at the time of the sale, the grain having the benefit of the competition between several hundred buyers on this market, who are here buying grain for thousands of points throughout the East and South as well as for Europe. There is no combination possible between this large number of buyers, which is in direct contrast to the state of affairs that frequently exists in the smaller towns, as there it makes no difference whether the farmer takes his grain to one grain buyer or another; he gets no more for it, as they frequently either pool their issues or combine and agree not to bid over one another.

There is no more reason why a farmer should sell his grain himself to a Chicago buyer any more than to his home buyer, because whoever buys an article endeavors to get it as cheaply as possible; but when he consigns his grain to a legitimate commission house to look after it for him, it is the duty of that house to endeavor to obtain the most possible for it, it being as much to their interest to do so as it is to the farmer to have them do so, because the more they satisfy the shipper the better are their prospects of receiving further consignments from that locality.

Present trade conditions, however, make it possible for farmers as well as grain buyers to not only make $\frac{1}{2}$ cent a month by holding their wheat at home for a reasonable time, but oftentimes 1 cent a month, or even more, by selling their grain to be delivered in the central market at some future time. If a farmer wanted to sell his wheat delivered in December he could do so through his commission house, keeping his wheat at home until time enough to make his delivery when he would save the carrying charges which accrue on grain carried in the large cities, the storage alone in the city elevators being 1 cent a month per bushel; in addition there is about $\frac{1}{2}$ cent per bushel per month for interest and insurance, making a total cost of 18 cents a bushel a year for carrying grain in Chicago.

The present system for transacting business, on the various Boards of Trade, has been perfected through the experience of business men for ages, and antagonism toward the so-called option, or future trading, is through it not being understood rather than because of any harm to the producer.

The present ruling price for December wheat in the Chicago market is 55 cents per bushel. Now suppose a farmer wanted to sell 1,000 or 5,000 bushels of wheat, but was not prepared to deliver it at present. He could sell it to be delivered in December and get $\frac{1}{2}$ cents a bushel more for it for December than the price ruling for July. When his wheat came in here and was inspected by the state inspector, should it not grade No. 2 (the regular contract grade), but should go No. 3, it could be sold on its merits on the market for cash, and the future sale could be bought back. It frequently happens that we obtain a better price for No. 3 spring wheat by sample on track than regular No. 2 wheat is bringing in elevator. Northwestern hard No. 3 spring wheat frequently commands from 2 to 5 cents a bushel premium over the regular contract grade of No. 2 spring. Therefore, it is only necessary for the farmer to take advantage of present existing conditions to reap the full benefit of all the carrying charges by selling his grain for future delivery. Every opportunity which is open to the country grain buyer, or the city trader, is there for the farmer as well.

We fear we were misunderstood in stating in a

former communication that it was the farmers' timidity which prevented him from shipping his own grain. We simply stated facts which we had learned from our very voluminous correspondence from farmers in fourteen states throughout the Northwest, many of them writing to us that they were the first ones to try shipping from their place. They were highly satisfied with the results, and that more of their neighbors would ship, but that they were afraid, as the grain buyers told them that they might never hear from their consignment again (cautioning them to be careful of those Chicago commission men, the very men that the grain buyers consign their grain to). Farmers can easily ascertain about the standing of a commission house by writing to their references, and when they receive a satisfactory reply they can then ship with perfect confidence.

Our plan, which we know to be practical, is for the farmers of every neighborhood to form themselves into a farmers' co-operative shipping association, putting in a platform scale and grain dump, which will enable them to weigh and load their grain into cars with the same facility now offered them by the elevators. Your readers will readily see that this is the only practicable solution of the price problem. The fact of the matter is that the price is and always will be fixed for the farmer by the supply and demand; the only question being whether that price shall be made by the country grain buyer or by a representative of the farmer (the commission house) at the central market, who is governed in fixing the price each day by the actual demand for the article on sale.

H. H. CARR & Co.

If there is any practical way for the country buyers to protect themselves from this man's work and charges, I would like to know of it.

A. T. BROWN.

REGULATION OF THE RUSSIAN GRAIN TRADE.

Editor American Elevator and Grain Trade:—I have received a letter from E. O. Wurzinger, Moscow, Russia, which may be of some interest to your readers. Translated it is as follows:

We live in a time when there are many difficulties in supplying provisions for the people, and the poor condition of the grain trade becomes very evident. In spite of our duty on corn, which was brought about by the establishment of the Farmers' Bank and Rural Economy Society, corn growers still consider the export of that article in the light of a detriment to the good of the country. The export of grain in Russia is still wholly in the hands of representatives of foreign firms, whose agents travel through the corn regions buying up the corn for exportation. This indirect means of exportation has the effect of raising the price considerably, the whole practice being very expensive, and, as the freight charges go as high as 5 to 10 copecs per pood (36 pounds), the resulting price of the corn is very high. Recently the railroad companies have begun to compete with these exporters and advance 60 to 70 per cent. of the purchase price to growers, in this way getting considerable trade.

It cannot be denied that this has injured the Russian grain trade. In the first place, large quantities of unsold grain are exported and stored at foreign markets, which causes a fall in prices; and in the second place the advance in the price of corn leads the growers to hurriedly dispose of their grain, which robs them of the possibility of selling at more advantageous prices. The years 1888-89 gave proof of this. The greater part of the crops were exported at prices which scarcely covered the cost of harvesting and seed, and in spite of the good crops the scarcity of food among the Russians was very noticeable.

This would not have been possible had the grain trade been properly regulated. It is, therefore, absolutely necessary to regulate the trade in such a manner that the most advantageous marketing of crops should be secured, and that such quantity of grain be kept in the country as will secure the welfare of the inhabitants from harvest to harvest. As the surest means of accomplishing this it seems necessary for the corn regions of Russia to have a chain of elevators in the hands of a company which is between a state corporation and a private stock company.

At first glance this project may seem surprising, but I will try to explain it by figures. To form an estimate of what the size of this chain of elevators would be one must take into consideration the average size of the grain crop of Russia; that is, after the amount used for seed 1,600,000,000 poods remain for export and home use. If one considers that one-fifteenth or one-sixteenth of the grain is to be kept in the elevators planned (which are to be built in a year) the capacity must be such as to contain one-sixteenth of 1,600,000,000 or 100,000,000 poods, which could be divided among 250 elevators built at suitable places in the corn regions. Each should have a capacity of at least 20,000 poods, and be capable of holding a greater amount subject to arrangement with the corn grower.

Estimating the cost of one elevator of 1,000,000 poods at 500,000 rubles the whole line of elevators would cost 50,000,000 rubles. As it would be difficult to raise all the necessary money, it would be of advantage to issue bonds secured by the property of the stock company and buildings which were erected by this means. These bonds might have a face value of

100 to 500 and 1,000 rubles at an interest of 3 to 5 per cent., which would be paid in advance. These bonds are to remain in circulation until their value will be such that their cancellation will not endanger the personal property of stockholders. The bonds can be realized by giving extra bonds without interest by arrangement with the state bank.

Thus, much aid would be given the projectors and the realization of the scheme does not seem impossible. Although the officers of the company will control the business, their office must be limited, as state departments are not allowed to interfere in matters of trade. As a solution of the question of management of the system, the organization of working companies which will not work with their capital or run any risk seems the most natural. The working company will operate at the cost of the state bank and will not want for funds.

As security the company will give bonds of, say 10,000,000 rubles to the state bank. If we assume that the company receives one-fourth copec commission for every pood of corn it would average 4,000,000 rubles per year; so we must come to the conclusion that the receipts will amply cover the expenses for the business transaction. At such favorable terms more than enough people will be found to enter as stockholders, especially as the value of stock is sure to rise in a very short time. In the formation of the company there will be originators and members, the latter managing the several elevators. Only members of unquestionable reputation will be accepted, who will not withdraw from the grain trade, who understand the grain business and to whom the independent running of an elevator can be entrusted. It would be preferable that the members should consist of sworn graders. In this way all fear of having impure grain put into the elevators would be avoided, from which Russian grain has already suffered at foreign markets.

If we assume that Russian corn advances 5 copecs per pood in foreign countries, and that expenses are reduced 5 copecs per pood, we have a profit of 10 copecs, a saving of 160,000,000 copecs on the sale of 1,600,000,000 poods. Every manager will be supposed to give a security to cover the amount of sale from his elevator. While they fulfill the functions of managing corn inspectors they are dependent upon and subject to the stock company and the principal central working company. This double control will do away with all possibility of fraud. The elevator managing member of the company is to receive, besides the interest on his bond, a certain salary and a commission on all sales; so he will not lose interest in his work and will be forced to value his position.

As we proceed to the question of the erection of these elevators we must first mention that at places where the largest quantity of grain is expected, as at railroad centers, at harbors and at commercial towns, a great number of elevators must be erected. Where the shipments would not be so great, a smaller number would be sufficient. So that the natural distribution of elevators would be as follows: Small, steppe district elevators; medium, county, provincial and junction elevators; large, harbor, foreign and central elevators. The medium size elevators must be erected at points to which the greatest supply of grain is brought. The smaller elevators should be built at places where the speculative enterprise exists in proportion to the wants of the locality.

For the smaller farmer the profit will lie principally in the erection of the last described elevators. As they are near him they alone can save him from the hands of the buyers. He is relieved of all necessity of sale and also receives 60 to 70 per cent. of the price of his grain in advance. In this manner the small farmer receives at least as much, if not more, than under existing circumstances. He then gives to the company the full control of his grain at the best price. After the sale the company shows him the bills and pays the difference after deducting the commission. In this way the smallest farmer has the same advantages as the greatest corn dealer. Some objection has been raised against the building of the small elevators on the ground that they would not have the necessary facilities to receive the many different kinds of grain. This objection, however, cannot hold good. The grains can be stored separately, which will prove to be the main work of the experienced manager.

The junction and country elevators must be at places where large quantities of grain are bought and sold. As this arrangement will be principally to meet the wants of the smaller dealers who send their grain to be shipped, it will be graded and stored, and will not need much care provided the houses are large enough to accommodate large consignments brought directly from neighboring places. The nature of these elevators makes it necessary that their construction be undertaken with the coöperation of the railroad companies while their management remains in the hands of the elevator company. As the last link in this chain of elevators appear the large harbor or foreign elevators, which will reduce the cost of exportation in every way and do away with the possibility of adulterating the grain before it is exported.

The rules regulating the acceptance of grain for the elevators would be as follows: First, that the grain comes from the grower to the nearest elevator without regard to grade. Upon delivery of his grain the owner receives a receipt in which the amount and

quality are specified. Upon its delivery the right of disposition in the future up to the time of its sale is under the control of the management. As the elevators are in constant communication with each other, the grain owner can at any time get market prices at the nearest house, and can give orders as to the disposition of his grain: that is, he can order the grain to be sold on commission or to be kept for a certain length of time. After the company has accepted the grain for sale on commission it will be sent to the larger elevators near the ports of exportation.

With such systematizing of the grain trade will result statistics of sales of ready grain, which will give control of the surplus production. So the surplus of grain can be forwarded to regions of poor crops and the fixing of the market price of Russian grain must gradually devolve from the foreign countries to Russia.

It is superfluous to explain still further the great advantages such a system would have. It remains to mention that with this chain of elevators our mills will be greatly benefited. Only an outline of the project is given here, but it is explicit enough to enable one to form an opinion and make a criticism of its value.

JAS. MACDONALD.

Chicago, Ill.

A CARRIER'S FAVORS TO RECEIVERS.

We have received a strong protest from a grain merchant in this city against the practice of the Grand Trunk and Canadian Pacific railway officials giving information to certain shippers and dealers in the city, in some cases days before the actual consignees are notified of the arrival of their goods. Had the communication above referred to been couched in less immoderate terms, we would have published it in full; but in this instance we can only state the purport of its contents in our own words. The dealer in question complains bitterly of the practice of certain parties taking information to the "favored few" every day, which consists not only of the arrivals of their own produce, but those of their neighbors, along with the names of the country dealers shipping the goods. This information is claimed to be most disastrous to those receivers who are not notified by the railway officials promptly upon the receipt of their goods. It is asserted that in some instances the shippers of these goods have been communicated with from parties here before the consignees had been notified by the railway companies.

Upon making inquiries, however, we find that the railway companies give information to all receivers inquiring about their goods alike, without showing favors to one more than another, and that if merchants receive any information concerning other than their own goods, it is due to parties copying it from the books while getting the particulars of their own goods; and it is difficult to see how this can be prevented, although receivers, one would imagine, should be promptly advised of the receipt of their merchandise, so that the undue advantage which appears to have been taken in many cases by the adoption of the unfair methods above referred to may be obviated in future.

One can readily understand how the interests of consignees may be seriously jeopardized if certain parties in the same line of business receive information from the railway companies relative to the business of their rivals, such as the notification of the arrivals of goods in advance and the names of the parties who ship them. This latter information, it seems to us, should certainly be kept private by the railway companies, as it is giving away the business of certain merchants to their rivals in trade, which is anything but right; and we would be inclined to doubt if the railway officials are aware of this being done. That this information has and is being imparted to merchants in this city, regarding the goods of other parties, appears to be a well understood fact; but it is quite possible that it is being done without the knowledge of the heads of the railways.—*Trade Bulletin, Montreal.*

PAYING EXCESS FREIGHT.

There is always a tender spot in the shipper's heart for the railroad that makes no overcharges. Here and there are railroads which do not make and keep such tender spots—the excrescences are of a callous nature, and from the way the people talk on such occasions it must be hard on the railroad's conscience to be packed away out of sight where no one can get at it.

Still, even with the best of management mistakes will occur and excess charges be billed on freight. More than one of our readers has learned to his sorrow the fact that the local freight agent is hemmed in by a set of cast iron rules and customs which may or may not leave an opening for the particular occasion which may have aroused the dealer's attention. No matter how willing the local freight agent may be to wire in to headquarters for a correction of billing, the result is usually the same in substance, and he can only say to the consignee, "Pay the freight and file a claim for overcharge."

Theoretically this is all well and good, for there have to be officials of the roads to pass upon the numerous claims for overcharge and excess freight as well as other less obvious damage. Practically this move is a nuisance to nine out of ten consignees who have any occasion to ask a rebate.

Once made, the only way to get the claim allowed is to keep it moving—writing to the general agent of the railroad or in some other way keeping it straight before their eyes at least once a week.

Numerous instances could be quoted to show the mechanical action of the claim departments of such roads, which seem to shippers and consignees to be purely brass. The object or objects of this mechanical treatment of claims cannot be stated fully, for they vary so much with different companies and shipments; but the citation of a couple of instances will give a clew.

A grain shipping firm whose capital was in the neighborhood of eight or ten thousand dollars, and who were obliged to borrow heavily in order to carry on their business, had for years one-half or more of the amount of their capital laid up in claims for overcharge on grain which they had sold delivered "on track" in the cities of their Eastern customers.

A small shipment of goods was made to "shipper's order" and the delivering railroad denied ever having received the goods, which were valued at \$96. The consignee had called, deposited the \$93 with the local agent, who was also the general agent, and for three years the claim departments of the two other lines which had handled that shipment were at work on the claim, which was eventually paid, without any explanation, by the same man as general agent who as local agent had delivered the goods.

A firm attitude is the only one which can be presented to a common carrier with any hope of successful termination of the claim, and still more is this necessary with regard to getting freight from the custody of the company at the proper charge when it is billed in excess.

Last year a merchant in Southern Illinois received notice that there was a shipment of goods at the depot for him. The traveling agent of the house came in after the merchant had been attempting to get them at the regular freight rate instead of the double rate at which they were billed. Having failed to get any satisfaction other than "pay the bill and file a claim," he stated the circumstances to the traveler. Acting on his advice, there was just convenient time before supper to go to the agent and tender him the proper amount of freight with notice that unless the goods were delivered by noon of the next day the merchant would replevin the goods and let the railroad sue him for the freight.

At nine o'clock the next morning the local agent had telegraph orders from headquarters correcting the billing and the goods were delivered at the right figures. Where the rate is known and a dealer can

wait for his goods a day such a method may save delay and bother as well as the use of the amount of the overcharge.—*Farm Machinery.*

GRAIN WAREHOUSEMEN AS SPECULATORS.

The New York *Evening Post* makes the following suggestive remarks: The abuse of an incomparable system of grain elevators and warehouses continues, by enlarging storage capacity wholly for speculative purposes. This system is the natural outgrowth of requirements attending increased crop productions and for handling them at a minimum cost to meet the greater competition every year in the world's grain markets, and in its sphere of action represents the progressive spirit of the age, in common with steam, superseding all former modes of travel and transportation. But, forced beyond legitimate limits of requirements, extended for speculative uses entirely as at present, the system in a great measure reverses its beneficent advantages. Unnatural conditions ensue. Enormous stocks accumulate at primary centers largely for speculation, and become a menace to stability. Fictitious values, too high or too low, prevail, and distrust replaces confidence and gradually undermines healthy conditions. The great elevator and warehouse systems become competitive buyers in their own and other markets and in the country, in their efforts to fill their storage room to its utmost capacity and then sell against their holdings for "future" delivery in speculative markets for the carrying-charge profit or the so-called premiums, expecting to repurchase later and resell for more distant delivery, and so on ad libitum. Thus, for the time, the natural inflow and outflow are obstructed and the universal law of supply and demand overcome; but sooner or later natural conditions will be asserted with retributive results.

Another matter seldom referred to is the unjust relative position of the investor and warehouseman, which should not be allowed. The warehouseman sells his holdings for a future delivery and thereafter should hold the grain in trust, as he does not own a kernel of it; but, by the rules of the trade, he controls the grain as if still owning it, and, at his pleasure during the interim of delivery, as opportunity may offer, can use it in a speculative way, greatly to the injury of the investor's interest by forcing it on a weak and strained market. The warehouseman must replace such sales, but usually the odds are in his favor. Meantime the investor and actual owner can only look on, possibly be dislodged and forced to sell out. To protect ownership from such proceedings, all contracts with warehousemen for future delivery grain should include a control clause or guarantee that the grain shall be held for the investor similar to hypothecated stock.

REPORT ON AMOUNT OF WHEAT FED.

The returns from the correspondents of the statistical division of the department of agriculture relative to the amounts of wheat fed to stock, estimate the quantity already fed, that is to say, up to October 30, 46,030,000 bushels, and the estimated amount to be fed 29,273,000 bushels, making a total of 75,303,000 bushels.

The figures on which the feeding are based are merely the meagre estimates from the states wherein correspondents have complied with the request of the department, and must not be taken as anything more than an approximation to the local feeding of wheat from present supply.

The severity and length of the winter will necessarily influence the final findings upon this question.

The Bauner Milling Company of Buffalo, N. Y., is storing wheat in canal boats for the winter.



EVOLUTION OF THE HOG.

—*Toledo Weekly News.*

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 7. Time of Delivery on Bids.—We notice on page 172 of the November issue of the AMERICAN ELEVATOR AND GRAIN TRADE Query No. 6 from "Ignoramus," which we think applies to our daily bids. Our corn bids are based on the cash price, and therefore we must have quick shipment. New corn for deferred shipment is not worth as much as it is for immediate delivery. Our oat bids are made ten days, as that is the nominal time on bids. Wheat and rye we make twenty days' shipment, which gives the seller a chance to ship inside of that time if he wants to; and if he doesn't happen to ship until the end of twenty days it cuts no great figure. Our bids are all printed alike to everybody, and therefore these conditions are made so as to come within the requirements of anybody who might have occasion to sell. There are no other reasons for this distinction.—J. F. ZAHM & Co., Toledo, Ohio.

THE GAS ENGINE IN FRANCE.

The increasing use of the gas engine makes it necessary for engineers to keep abreast of the improvements that are being effected each year, and many realize that the gas engine will gradually supersede the steam engine in many places for small powers. Its use in larger units for electric lighting work is also becoming more common, and a plant of three 100-horse power engines in Connecticut has been running for two years with excellent success and economy. In Europe the subject of gas engines has received even more attention than in this country, and a French technical society appointed its last three presidents to prepare a report on the use of gas engines. The report is a lengthy one, and shows clearly what has been done in France at least. One portion of the report is a little surprising in that the Langen Engine is reported as dropping out of use on account of well-known defects. The machines of 1867 consumed from 95 to 124 cubic feet of gas per horse power per hour. Now machines are regularly made which use only 17.65 cubic feet, as, for example the 3-horse power Charon motor with single cylinder. This is a remarkable advance; and along with it the use of gas engines has spread, and, further, the tendency is toward a steady increase in the size of the engines.

The four leading gas engine makers in France, Otto, Charon, Crossley and Niel, sold in 1890 192 engines of 734 horse power; in 1891, 344 of 1,157; in 1892, 516 of 2,099; and in the first five months of 1893, 372 of 1,821 horse power. The displacing of steam engines by gas engines thus appears to be a mere question of time; and gas engines solve the problem of distribution of power in a very convenient way.

But is the motor itself likely to undergo any fundamental changes? There have not been any such since 1889. The proportion of the total heat of explosion lost incidentally is still practically not less than 80 per cent.; and it seems that when the loss from one cause has been reduced that from another has generally increased. There is a limit to the heat which can be recovered at work; not more than 38 per cent. can, even theoretically, be recovered, as Witz has shown; and this means that we cannot expect even, in theory, to run gas motors on less than 13.35 cubic feet per horse power per hour, as an irreducible minimum.

But with these data the temperature of the outflowing gas is 1,353° F. The question then is, can the heat wasted in the outflowing gas be recovered to any material extent? Or can the expansion be continued until the temperature is nearly that of the atmosphere? The Gardie motor utilizes the regenerative principle; it uses fuel gas at a high pressure; the compressor produces compressed air, partly for the gas generator, partly for the cylinder. The Charon motor has a regulator which simultaneously controls the admission of gas and the expansion. The air is sucked in through a worm; at the instant of compression the gas valve closes; the air valve remains open for a little while longer. The results are remarkable, without our being able to state clearly how they come

about. In a 4-horse engine tested by M. Witz, the consumption of gas was 18.89 cubic feet per horse power per hour, the gas having a heating value of 5,980 calories per cubic meter, or 670.6 British units of heat per degree Fahrenheit. M. Witz thinks this high efficiency is due to a slower expansion; perhaps it is a question of the construction of the regulator.

As to consumption of gas, the Crossley motors are guaranteed to use from 30 cubic feet per horse power per hour for a 24-horse to 19.43 for a 70-horse power engine. Ottos use from 21.2 to 24.72 cubic feet; the guaranteed consumption for the 120-horse power engines at the electric lighting station in Lille is 21.2 cubic feet per horse power per hour. The Charon motor, 25-horse, destined for electric lighting the new harbor at La Rochelle, at 143 turns per minute uses less than 17.65 cubic feet per horse power per hour; when pushed on to 28 horse power the consumption fell to 16.21; while at the same time the engine ran very smoothly and used little water, which results are remarkable.—*Hub News.*

INTERSTATE COMMERCE COMMISSION'S REPORT.

The Interstate Commerce Commission transmitted its eighth annual report to Congress December 5. The report says that it is the duty of shippers, railroad managers and citizens generally to assist the government in running down violations of the statute designed to protect their interests. It recommends that the carrying corporations be made indictable and subject to fine for violations of the act.

The report speaks of the unreasonable freight rates from Chicago and Cincinnati to Southern points. Also of the unreasonable rates on wheat. It refers to the failure of many carriers to post their tariffs as required by law. The commission explains the necessity of providing single classification of freights for the whole country, saying that experience has shown the necessity for Congressional action, and supports the belief that uniform classification depends upon the passage of a statute requiring its accomplishment.

The report states that the railway service which pertains to shipping, billing and the statement, collection, and correction of charges, especially as to the traffic over connecting roads, is conducted with much uncertainty, lack of system and regularity, so that it justifies charges of gross carelessness and disregard of the rights of the shipping public.

Carriers ought to publish their tariff rates and schedules plainly enough and employ agents sufficiently skilled to enable them to correctly quote rates to shippers. The fact that carriers undertake, after the collection of overcharges, to adjust the same, while right and proper in itself, does not furnish an excuse or justification for the practice of overcharging to the extent to which it is carried on. The present method of adjusting claims of this character is attended with such delay and vexation to claimants that it is extremely unsatisfactory, resulting in great injustice to shippers and consignees. Undercharges also result in grave injustice.

It is stated that the provision of law relating to through routes and through rates, on account of the limited meaning which had been given to it by the courts, is practically inoperative, and it is strongly urged that the law be amended in order to give effect to the intention of Congress in respect to this matter.

HOW TO CLEAN MACHINES GUMMED WITH OIL AND DUST.

For cleaning parts of machines that are gummed with oil and dust a strong solution of soda is recommended as the best cleansing medium. To one liter of water take 10 to 15 grains of caustic soda and 100 grains of ordinary soda. The mixture is heated, the machinery parts laid in it and speedily cleansed of all fat, oil and dirt. All that is then necessary is to rinse and thoroughly dry the parts. The effect of the lye is to cause the grease to combine with it, forming a soap. To prevent lubricating oil, etc., hardening on the machine parts it is necessary to add one-third of kerosene to it, and it is advisable to oil up with kerosene from time to time.

THE STORAGE OF GRAIN.

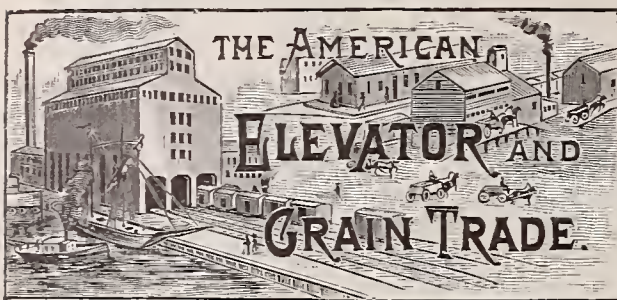
The practice of storing grain in pits, lined, perhaps, with masonry or pottery, can be traced back to very remote antiquity. In cold and temperate climates the problem of storage is more difficult. In some countries a system of large metallic reservoirs in special buildings is employed, which are charged from above and emptied from below. From studying the phenomena that occur in the storage of grain both by observation of large stores and laboratory experiments, it has been found that grain placed in air absorbs oxygen and gives out carbonic acid; and even when air is excluded grain still liberates carbonic acid through intracellular fermentation. The carbonic acid formed, in any case, measures the alteration and loss; and comparing the influence of renewal of air with that of confined air, it has been noticed that in the former case the grain liberated about ten times more carbonic acid than in the latter.

In contact with air the carbonic acid formed is always inferior in volume to the oxygen absorbed. There is a secondary and incomplete combustion like that in germinating of oleaginous seeds. The oxygen is chiefly fixed by fatty matter. As to moisture, grain usually contains 11 to 19 per cent. of water. Very dry grain gives little carbonic acid; in consequence, it is exposed to ravages of insects, which do not then meet with an asphyxiating atmosphere. The proportion of carbonic acid increases very quickly with the degree of moisture, and beyond 13 to 14 per cent. of moisture the progression is enormous. The proportion also increases very rapidly with temperature till about 50 degrees. Here there is a stoppage; but on heating further the combustion acquires fresh energy. Two phenomena of combustion can be distinguished—one of physiological order, corresponding to respiration; the other purely chemical. It is said that anesthetics, such as sulphide of carbon, diminish, without stopping, the formation of carbonic acid.—*Milling and Market News.*

FLAX IN MICHIGAN.

A. A. Crozier of the Michigan Agricultural College has sent a letter to the *Michigan Farmer* in which he states that the station has received several inquiries recently concerning the cultivation of flax in Michigan. This crop is largely grown in states farther west, but chiefly for its seed. In the moister climate of Michigan it is believed that a better quality of fiber can be produced, and that on suitable soils flax may be grown profitably for its fiber. The only parties manufacturing flax in this state, so far as we know, are Jas. Livingston & Co., with headquarters at Yale, St. Clair county. We have a communication from them in which they say: "We are now operating five mills in this state. We have this season used about 2,400 tons at the five mills. The average crop is from 3,000 to 4,000 pounds per acre. Farmers grow it for us and we pay them \$10 a ton delivered at our mills, just as it is pulled and with the seed on. We are of the opinion that the climate of this state is well adapted for growing flax, the atmosphere being moist, which is very essential to the production of a good fiber. Owing to the very light crops the past three years flax has not been a profitable crop to the farmers, nor has it been to us, the quality being poor and the prices low for that class of flax. Flax requires a good rich soil, free from weeds, which ought to be drained. Farmers are in the habit of sowing it on poor land not properly fitted, and the result is poor flax. Unless it grows about three feet in length we can do nothing with it but make tow."

Shippers have been making a howl to their Chicago receivers because so much of the flaxseed sent to this market is inspected "Rejected" and "No Grade." The proportion of these off grades during the fall and winter so far has been unprecedented, and where shippers have expected to receive returns on No. 1 seed it has been graded lower than that and sold at a discount. This has led some pessimistic ones to jump at the conclusion that the astonishing prevalence of under-grade was in the interest of certain operators in order to lessen the stocks of contract to their own advantage.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., DECEMBER 15, 1894.

THE Grain Congress met at New Orleans November 21 and 22. The attendance was not as large as was anticipated.

THE grain growers of Washington are greatly dissatisfied with the grading done by the buyers at the central markets, and some of them are determined to secure the enactment of a state inspection law.

COUNTRY elevator men merit a rebate on all grain shipped over any line just as much as any soliciting freight agent of that line merits pay for his services. They keep their elevators open the year around and secure business for the carrier without recompense or favor.

THE Pneumatic Steel Warehouse Company of this city has elected John Hills president, R. S. Lyon vice-president, William Nash treasurer, and L. L. Smith secretary. This company was incorporated October 9, for the purpose of building steel storage warehouses on the Smith plan. The first plant will have a capacity of from 500,000 to 1,000,000 bushels, and the intention is to build other warehouses as rapidly as the requirements of trade demand. The site of the new elevator has not yet been announced.

SECRETARY MORTON thinks that an agricultural census each year would be of value. The points he would include in it are, the area of each of the more important crops, the aggregate product of each of such crops and the quantity of wheat, corn, cotton and tobacco in the hands of farmers at a date after the spring planting and before the beginning of harvest. The cost of this additional work of the statistical bureau is figured at half a million dollars. Whether this is intended to supplement the monthly re-

ports or supersede them is not stated. Whether it would be a benefit in either case is open to question.

MINNEAPOLIS has been very much wrought up over the Ging tragedy, in which a woman was murdered to obtain the insurance on her life. It is now claimed that the supposed murderer was also instrumental in burning the elevator at Hamel, Minn., on which Miss Ging had a loan secured by an insurance policy. Attempts to defraud insurance companies, both life and fire, seem to be epidemic this year.

OFFICIALS of railroads at Chicago declare that it will be utterly impossible to maintain through grain rates so long as trunk lines persist in billing to fictitious destinations. It is a notorious fact that nearly all the trunk lines make a practice of billing grain to some interior point taking a higher than a seaboard rate, and changing the billing in transit to suit themselves. This manipulation gives trunk lines 3 to 5 cents a hundred to buy business with, as the excess rate is deducted from the through rate before division.

GERMANY has a so-called Agrarian party which proposes to accomplish a pretty long list of reforms. One of these is an anti-option bill to regulate the German exchanges. Another project is national granaries copied after the Alliance scheme of government loans on agricultural products. The late discrimination against American food products and the threat to extend this discrimination come from this party that is bent on building up the agricultural interests of Germany at any cost to the manufacturers.

ACCORDING to the Illinois state crop report not enough wheat has been fed to cattle and hogs in this state to be worth mentioning. If this be so, there must have been an unusually heavy crop of prevaricators this year; for there has been plenty of testimony from millers, farmers and feeders that wheat has been freely used for feed, both whole and ground. The state report is evidently mistaken. Scores of millers will bear witness to the grinding they have done for feed and the quantities of low grade flour that have been sold for the same purpose.

THE cental of 100 pounds, the most sensible unit of measure ever used, has not yet been adopted by the trade, but dealers continue to struggle along with the two measures. The grain is bought from the farmers by the bushel, but measured by weighing, which necessitates a reduction by the buyer. What he loses through error is a sacrifice to a benighted system of measures. Grain is shipped by the 100 pounds, and that is the unit upon which freight rates are charged. The cental system would greatly facilitate the business and prevent many errors.

AFTER January 1 the roads having lines in Iowa and Northern Illinois will make no more through rates on grain and its products from this territory to points east of Chicago, or to points east of the eastern terminals of these roads. Full local rates will be charged from this territory to Chicago, and the Eastern roads will have to do the same from Chicago to Eastern points. It is expected that this radical action will create a storm; probably this is what is wanted. It is true, as the Western roads charge, that the Eastern roads have long made an additional arbitrary charge for hauling to interior points, which charge is deducted from the Western roads' proportion of the through rate. The Western roads are clearly at a disadvantage as matters stand now, and claim that they have made every effort to have the matter adjusted on an equitable basis. This move of the Western roads will bear heavily on grain shippers and millers until some adjustment is made.

REASONABLE FREIGHT RATES.

What constitutes a reasonable rate to charge on freight carried by the railroads is, and probably always will continue to be, a subject of contention. But Judge Brewer has made a decision that is startling and must not be allowed to stand. The Nebraska Board of Railroad Commissioners lately undertook to prescribe reasonable freight rates in that state and the railroads appealed to the courts. Probably they never expected so sweeping a decision in their favor as the judge has just rendered. If his decision becomes a precedent we will soon hear of bankrupt roads paying dividends.

Briefly, the judge holds that the right of the commissioners to regulate rates is unquestionable; but he then proceeds to say that reasonable rates must be based on the capitalization of the roads and not on the cost of construction. He says that if a road cost \$20,000 a mile to build and is stocked and bonded for \$70,000 a mile, its freight rates may be based on its capitalization, not its cost, and the courts must still construe them as reasonable.

Of course the construction of a railroad is not its total cost. Its equipment and operation must be provided for. But the decision of Judge Brewer is simply revolutionary. There is no barrier left between shippers and corporate greed if such a decision be held to be law. No distinction is made between the capital actually invested and the water represented in the stock. A railroad is entitled to charge such rates as will pay costs of operation and maintenance with interest on capital invested. This is the only just basis on which to figure rates. The basis proposed by Judge Brewer means that extortion may be practised without redress, even by legislation. The decision must not and will not stand.

THE RAILWAY POOLING BILL.

Opinions as to the merits of the so-called pooling bill, which has just passed the House, differ very widely. By some the bill is denounced as a concession to the railways at the expense of the public, and insinuations are made that its passage was secured by the well-known arts of the lobbyist. The fact is pointed to that Wall street immediately responded to the passage of the bill in the House and its probable passage in the Senate by freer buying of railway securities at higher prices. It is evident that railways expect to profit by the bill, which permits of traffic arrangements that will end destructive competition by the roads, and it is inferred that the increased earnings will be at the expense of the public.

But, on the other hand, the pooling bill received the sanction of the Interstate Commerce Commission and all the state railway commissions except that of Minnesota. Many of the largest and most influential commercial bodies of the country have indorsed it, and even Judge Reagan, who was the author of the clause in the interstate commerce act forbidding pools, has announced that he favors traffic arrangements by the railroads. The railroads themselves expect to be rid of an army of freight solicitors and hint that they want to be free of the domination of the "large shipper."

It is undeniable that at the present time the "large shipper" is running the rate question to suit himself. Flagrant instances are known but cannot be proved where the large shipper enjoys an advantage that relieves him from competition. The rebate evil cannot be reached at present; the courts have decided that in the Counselman case. It is fair to assume that the railways are not pleased with the dictation of the big shipper, which makes them a party to violating the law.

Possibly a large share of the prejudice against the pooling bill comes from its name. The bill should be given a chance to show what it can do.

If it will place shippers on an equality without raising rates to pay dividends on watered stock and worthless bonds it would accomplish what the interstate commerce act has so far failed to do.

STILL FIGHTING THE ELEVATOR MEN.

The time for electing directors and officers of the Chicago Board of Trade is approaching, and the shippers and receivers are tearing open the old wounds inflicted during the fight with the elevator men. A vigorous fight will be made upon any friend of the elevator men who attempts to run for an office.

The shippers keep busy evolving new schemes to worry the elevator men, and the latest is a proposition to make all grain grown in one year non-deliverable on contracts after October of the following year. The object being to force grain out of the market and to prevent the accumulation of large supplies in this market to depress prices. The approach of the day when the grain was not deliverable would be a greater bear influence than the large stocks are now. It would also cause grades of "new" grain to bring a premium. The elevator men would bid strongly for it and sell for shipment. The state law requires that the grain of any grade first received shall be the first of that grade given out by the public warehousemen in cancellation of receipts, so that the elevator men would not experience much trouble in keeping his house full.

The elevator men have the storage room, and after years of unprofitable business they have learned how to get something out of the business. They are handlers of actual grain and are entitled to a fair profit on their business. That they will get it despite the efforts of the traders is not to be doubted.

A CHANGE PROPOSED IN THE INSPECTION AT SUPERIOR.

The North Dakota Railroad and Warehouse Commissioners have been at Superior recently investigating the method of inspecting grain at the head of the lakes, and while there complained that the wheat being shipped from North Dakota to Superior was being mixed with inferior grain from Minnesota and elsewhere, and that the farmers were thus deprived of the higher prices which their wheat merits.

In the first place their action is nothing but a band stand performance, intended to flatter and please the wheat growers of North Dakota. The wheat of that state, when shipped to Superior or any other market, is not mixed with inferior grain when sent to the public elevators, and is not sent elsewhere until after it is sold. Private elevator men mix wheat from North Dakota as well as wheat from other districts of the Northwest. They pay no attention to the place of growth of grain, but to its quality, and they will mix any grain they please, just as they and everyone else has a perfect right to do with his own.

The promise of the Superior Board of Trade men to remedy the trouble by establishing local inspection under the supervision of the board is naught but an empty play for trade. The inspection of grain has nothing to do with the mixing, and the establishment of another inspection department at the head of the lakes with other grades would only add confusion to the trade and hurt the shipping business of both Duluth and Superior. The grain marketed at both cities is the same, and the grades and inspection should be the same. Even now the trade of the country is burdened with a variety of grades and inspections. The business will be facilitated according as the grades and gradings of the different markets of the country approach uniformity, and it will be obstructed as they diverge from uniformity.

The Minnesota grades and inspection are all

right; if not they can readily be changed by a petition to the Railroad and Warehouse Commissioners. Although the department is run by the state, few complaints are heard against its work, and the inspectors are above the suspicion of being influenced by the buyers, because they are not employed by them, as they would be should the Board of Trade establish an inspection department.

The grading at both the head of the lakes cities is the same (no charge has been made to the contrary), and the uniformity should be maintained. The trade cares nothing about the jealous bickerings of the two cities, but it is decidedly opposed to being burdened with a variety of grades for grain of the same quality and kind.

A NEW PLAN FOR MARKETING GRAIN.

Our correspondent, J. A. Demuth, who writes on "Line and Terminal Elevators" in this number, no doubt has the interests of the country shippers at heart. His plan for reducing the element of uncertainty which enters into the country shipper's business is a good one. While it might prove impracticable as regards the grading at country points, still the correct weight can and should be ascertained at point of shipment.

The grade of the grain could be determined by sending a peck of it to the chief inspector of the nearest terminal market, or to the one usually patronized by the shipper. Such grading would be far more reliable than any done by one of an army of inspectors scattered over territory not under the jurisdiction of the power which made the grades and the inspectors. Then if his plan was put in force much of the grain would be kept in the country, and less would be stored at grain centers to depress prices and forbid an advance. If country shippers were not so much at the mercy of the buyers, when selling in distant markets, they would seldom sell at a loss and therefore could afford to conduct their business on a smaller margin.

A clean bill of lading would be welcomed with joy by every shipper, and a reliable grading before shipment, which would be maintained upon arrival of the grain, would give each shipper a violent attack of ecstasies.

DELAYS BY CARRIERS AND SHIPPERS.

Reports of blockades and car famines continue to come from different points of the country, showing inability or lack of desire on the part of the carriers to care for the grain traffic even in years of short crops. The spring wheat country and the Pacific Coast have experienced delays on account of scarcity of cars, and Buffalo and Chicago have experienced blockades this year. Grain has been delayed, yet carriers have made no offer to recompense those who suffered by the delay.

When shippers or receivers delay the property of the carrier they are charged demurrage, and in fairness the carrier should pay the owner of the property delayed for the delay, whether it be at point of shipment or in transit.

The *Railway Review* says that private refrigerator cars have averaged a distance of 70 miles a day for a year, and private stock cars 102 miles per day. This, of course, includes the days of idleness, so that when in use these cars must have made several hundred miles a day. It is not unreasonable to ask the carriers to contract in bills of lading to transport grain to destination at the rate of 100 miles per day from time of receipt, and to pay for any delay in excess of 48 hours at the same rate they levy demurrage upon the shippers.

Shippers should have it thoroughly understood that their object in demanding this very equitable charge is not for the purpose of making

money. Oh no! It is for the very laudable purpose of hastening the delivery of shipments so as to release cars and enable other shippers to send their goods to market, as well as to enable carriers to keep their rolling stock at work.

This is just what the carriers have claimed all along was the object of their demurrage charge, although they have shown only a half-hearted disposition to carry it out and this at the expense of the small shipper. The large shippers are never asked to pay demurrage.

DISADVANTAGES OF AMERICAN METHODS OF HANDLING GRAIN.

It is not often nowadays that anyone dares to mourn for the slow methods used by the grain trade years ago, but now and then an old-time dealer, who has a soft spot in his memory for things that were, rails against the methods which modern dealers have evolved. The general practice of American grain dealers is to make quick turns. Of course some often carry a large line, but generally because they cannot sell at a profit. If they sold they would surely lose, so they wait for a little profit.

A few years ago a Liverpool importer complained bitterly against our rapid methods of conducting the export grain business, and maintained that the Pacific Coast would eventually export all the grain sent to the United Kingdom from this country, because the long time Pacific Coast shipments were in transit gave the British importer an opportunity to sell it at a good price before arrival and without expense for storage. The advantage of having the wheat arrive in a fortnight and remain in store where it could be examined by prospective buyers and probably sold quickly at a good profit never occurred to the Britisher. He wanted time to consider the matter and time for prospective buyers to forget what he paid for it.

Another wail has recently been received in this country against the same methods, but this time it comes from Antwerp, and is as follows:

The American system of trading on certificated qualities has certain advantages, but also some very great drawbacks. Our importers do not like at all to trade in this way, as their sales and eventual profits are too easily controlled. In fact, the business is in the hands of everybody, and with the present keen competition there is hardly any profit left to the importer. He is in a much better position with wheats of other countries that are selling on samples. As only those can buy them who understand the qualities and are good judges, the number of competitors is smaller, and the importer has not only a better margin by judicious buying, but also by judicious selling, unless his sellers and buyers are as good judges as he is himself. Further, in North American wheat no time is left for the importer to wait for a better turn, as the wheat nearly always has arrived a fortnight after the purchase, while it takes several weeks or months from other countries, who sell also two or three months ahead without premium. If he would like to buy ahead on your side he has not only to pay a big premium on the wheat, but also on the freight.

The European importer can buy and store grain in this country if he does not wish it delivered immediately, but he must pay storage. The difference between the market value of grain for to-day's delivery and two months hence represents the cost of storage, insurance and interest, and buyers will always have to pay the premium for future delivery. Sellers cannot afford, and hence will not bear this expense.

REGULAR grain buyers should be notified by landowners of any liens held against grain of tenants so that they may escape loss by buying it. It is the regular buyer's business to buy grain from all comers, and it is not his purpose to defraud anyone. The landlord would save himself trouble and expense by notifying the regular dealers, and in justice to them, as well as for his own protection, he should notify them. Laws making regular dealers liable for liens on grain bought should be repealed or amended so as to give them some protection from the trickery of the farmers.

EDITORIAL MENTION

WHEN you move or make any changes in your business, send us the facts for publication.

COOPER well your cars, and do not forget that old, weak-framed cars are not fit to ship grain in. They are likely to spring a leak anywhere in transit.

THE state entomologist of Illinois estimates that the damage done by the chinch bug this year amounts to \$15,000,000. Seventy-seven counties suffered more or less.

THAT mutual fire insurance company for Illinois elevator owners has not yet been organized. If the elevator men of the state would make a determined effort or start it, they would soon have cheaper insurance.

DURING the last season considerable barley has been sown for hay in California. In some places the cows have been permitted to eat it when in the milk; others have cut and fed it and a little has been shipped.

IT is a dull day when several contradictory reports as to the wheat situation in Argentina are not put into circulation. Estimates of yield run from 60,000,000 to 106,000,000 bushels. These figures are certainly elastic enough.

THE figures given out for Iowa's corn crop show the extent of the calamity inflicted on the country by the drouth. The great corn state is credited with 81,000,000 bushels this year against 250,000,000 bushels last year. There are many parts of the world where a proportionate failure would produce famine.

SHIPPERS will avoid having to pay freight a second time by instructing station agents to mark bills of lading "Freight C. O. D." Then if the consignee fails to pay the freight after he has deducted it from the account of sales rendered to the shipper, the carrier cannot successfully sue the shipper for the amount.

A NEW monthly journal has been started by J. L. Rosenberger, who supplies many of the digests of decisions published in our department devoted to "Latest Decisions." It is entitled *Business Law*, and it will aim to inform the business man of his rights and to warn him of the rights of others. It is for the business man, not the lawyer.

ONE Chicago Board of trade man wired Secretary Morton on the morning of the day when the last government report was made: "Your report this afternoon will show 102 for area and 94 for condition." He was sufficiently far from the truth, 103 for area and 89 for condition, so that Secretary Morton might have written one of his justly famous letters on the subject had he been so minded.

THE Lake Carriers' Association is charged by the Ohio Labor Commission with driving small vessels off the lakes and endeavoring to secure a monopoly of the carrying trade. The charge sounds very strangely to one acquainted with the history of lake navigation of recent years. It is the very absence of monopoly that is driving the small vessels off the lakes. The average tonnage is increasing each year; and as rate-cutting is always indulged in, the small vessels

cannot compete with the big ones. That is the sole reason for the gradual banishment of small vessels from the lake-carrying trade.

THE fine weather and the accompanying good roads which have been enjoyed in the grain growing districts have had much to do with increasing the percentage of the crop marketed. A couple weeks of bad weather would cause a marked falling off in the receipts at primary markets.

WE were favored recently by a call from James M. Sinclair, Agricultural Commissioner of the Victorian Government, Melbourne, Victoria, who has spent some time in this country investigating American methods of handling grain. He is looking for a cheaper system of handling grain.

THE Illinois Railroad and Warehouse Commission are considering the advisability of reducing the force of grain inspectors at Chicago by fifteen and the expenses by \$24,000 a year. Before reducing the quality of the service the commissioners should consult with those who pay for the service and learn if they are willing to accept inferior work.

THE little kingdom of Greece must have been reading "hold your wheat" circulars, for the parliament has decided that the crop of currants should either be held back or destroyed in order to advance prices. They forget that such a move would give other localities, California for instance, a chance long sought of getting into the market on the ground floor and staying there.

SOME members of a recent grand jury in Chicago took a novel method of finding out the true inwardness of bucket shops. They had been appointed a committee to look after the bucket shops, and, to satisfy themselves of the facts, went to the bucket shops personally and took a few "flyers" for luck and incidentally to assure themselves that the shops were violating the law. They had no trouble in finding indictments after this unique personal investigation.

THE grain fleet from Chicago next spring bids fair to be the largest that ever left this port. The grain capacity of the fleet is 12,800,000 bushels, though all the vessels may not be loaded. The fleet will consist of 109 steamers and 82 schooners and barges. Last December the fleet was larger numerically, but its carrying capacity was less by over a million and a half bushels. The vesselmen are asking from 3½ to 4 cents for winter storage and transportation.

THE *Indiana Farmer* notices the trade literature of some of the Chicago bucketshops, and says: "These schemes are planned to trick the country gudgeons out of their honestly and hardly earned gains. They are artfully conducted and capture hosts of victims, but we don't want any of the *Farmer* readers to be found in their nets." We trust its readers will heed its advice. So-called "syndicates," "pools" and similar swindles find their victims largely among farmers, who have very hazy ideas of speculation.

AN Illinois grain dealer has commenced a suit for damages against the Illinois Central Railroad Company for delaying grain in transit twenty-four days during the strike last July. It seems that the company accepted the grain for shipment, carried it a short distance and left it. Under ordinary circumstances such a delay would be inexcusable, but it seems probable that the courts would find the strike a sufficient excuse for relieving the carrier from all liability for damages due to delay. The Illinois Central could not have delivered the grain

at destination had it desired to do so, and it should not have accepted the grain for delivery at Chicago except that its transportation be subject to delay by strike.

MICHIGAN farmers are again agitating for the enactment of a state grain inspection law, and some of them are anxious to have the state go farther than is usual and regulate the inspection at country points, as well as at terminal markets. This is not feasible, and as long as they stand out for this point they will hinder the enactment of a law providing for state inspection at central markets.

A SECOND test of the fire protection apparatus of Counselman's elevator at South Chicago was made a few days since, and a 3½-inch stream of water was thrown 250 feet in the air. With a 2½-inch nozzle a stream was thrown 300 feet. Water was thrown over the top of the elevator without trouble. Through the 3½-inch nozzle 3,600 gallons of water were forced in one minute. This independent fire protection plant was put in by the Barry Manufacturing Company, Muscatine, Iowa.

THE Southern states are giving more and more attention to the raising of corn. This year they produced 490,000,000 bushels, against 440,000,000 bushels last year. This is a larger proportionate share of the total corn crop than the South ever produced before. No good reason exists why the entire South should raise less corn than two Northern states, as has been the case hitherto. Some of the best corn land in the world is in the South, and in states that a few years ago did not raise enough for home consumption.

WE are indebted to Mr. Geo. J. S. Broomhall, editor of *Corn Trade News*, for the "Corn Trade Year Book" for 1894. This is the second annual review of the world's grain trade, and is compiled as a reference book for grain merchants and millers. It gives a past, present and prospective view of the international grain trade, with reports and statistics on crops, prices, imports and exports, with other valuable matter. With a harvest in every month of the year in some country grain dealing is a more complex business than it was a decade or two ago, when the weather was the determining factor in prices, and the "Corn Trade Year Book" supplies a necessity.

THE action of the Chicago Board of Trade, through its directors, in suspending Murry Nelson, has been sustained in court. Mr. Nelson's offense was "uncommercial conduct," which consisted in repudiating an agreement signed by the secretary of the National Elevator Company, by which it was agreed that the National Elevator should be made regular, along with the others. This was when the peace was patched up between the board and the elevator men last summer. The court held that it had no right to interfere with the board's right to discipline members under its charter, no matter if the board's action seemed arbitrary.

ACCORDING to the report of the Bureau of Statistics breadstuffs to the value of \$7,878,112 were exported during November, against an amount valued at \$11,124,272 in November, 1893, the exports for the five months ending November 30 being valued at \$45,461,486; and for the eleven months ending November 30 breadstuffs valued at \$111,820,271 were exported, against an amount valued at \$171,649,282 for the same time in 1893. In November 6,260,476 bushels of wheat, valued at \$3,245,638, against 7,065,912 bushels, valued at \$4,039,329, in November, 1893, were exported, 34,447,957 bushels, valued at \$19,252,224, being exported during the five months ending November 30;

and for the eleven months ending November 30 65,261,540 bushels, valued at \$38,656,268, against 102,927,700 bushels, valued at \$75,498,835, exported in the same time of 1893. During the eleven months ending November 30 37,910,232 bushels of corn, 539,628 of oats, 2,099,704 of barley, 286 of rye, against 48,602,183 bushels of corn, 6,994,197 of oats, 5,072,952 of barley and 763,719 of rye in the same time of 1893, were exported.

An enthusiastic believer in advanced agricultural methods, Sir A. Cotton, lately stated that 100 bushels of wheat could be grown on an acre of land. And now comes Sir J. B. Lawes, the great British agricultural authority, and offers Sir A. Cotton or anybody else \$1,250 if he will grow 1,000 bushels of wheat on ten acres of fairly average wheat land, allowing him to spend as much as he likes on the cultivation. And he further promises to give \$5,000 to anyone who will grow 100 bushels of wheat on ten separate acres, one in each of the ten English counties growing the largest acreage of wheat. It is safe to say that neither offer will cost Mr. Lawes a shilling.

THE Chicago Grain Receivers' and Shippers' Association has held another meeting—the first since its reorganization. New officers were elected and a committee was appointed to seek to make some changes in the system of weighing used by the Board of Trade weighmaster. If the association will only do something to secure the placing of an official public weighman in each of the public elevators, and then see to it that the grain is weighed carefully and correctly, it will have done enough to merit the name it bears. Country shippers are continually complaining of shortages in shipments to Chicago, and no doubt they will continue to complain until the cause for the complaint is removed.

THE Van Tassel elevator insurance suit has been decided in the Superior Court of New York City. Emory Van Tassel owned a grain elevator on West Eleventh street, in New York. He instructed the firm of Beecher & Benedict to place \$30,000 insurance upon it. They placed but \$5,000 on it, and the elevator was destroyed by fire. Van Tassel thereupon sued Beecher & Benedict for \$25,000, claiming that they had been culpably negligent in placing the insurance according to instructions. The case occupied several days in trial and a verdict was given for \$24,000, with an allowance of \$500 for costs. The case has been appealed, but it is hardly thought the Court of Appeals will reverse it.

WHEAT FROM SARCOPHAGI.

As an illustration of how hard popular superstitions die, "mummy" wheat affords an excellent example. Times out of number the stories of wheat found inside sarcophagi and mummy cases germinating after thousands of years have been proved unauthentic, says the *British Baker*. The grains which sprouted have been proved not to be of ancient date, but to have been actually taken from the nearest field for sale to the open-mouthed tourist. It is idle to tell the people that a committee of the British Association, which investigated the subject, pronounced conclusively against the truth, or the possibility, indeed, of these tales, as did the United States Department of Agriculture. Hooker, Carruthers, Flinders Petrie, Newberry, and every other botanist and antiquary of any eminence, have unanimously scouted the very notion. All is in vain. Somebody got some wheat from somebody else who had taken it from a mummy case, or had been told that it had been found there, and the corn sprouted. *Ergo*, it must have been part of the contents of Joseph's granaries, and so forth.

The fact is, that the so-called mummy wheat is a well-known variety grown from time immemorial in the Levant, and which, like all other seeds, seldom

preserves its vitality beyond the eighth or ninth year. But, in addition to the Arabs selling wheat "from mummies" to those in search of it, dahlias and maize, two American plants, have appeared among the "howadji's" treasure trove. The late "Rob Roy" Macgregor got his photograph taken for sale with an ear of "mummy corn" in his right hand. Unfortunately, it happened to be oats, a grain not known in Egypt at the date when mummification was in vogue. It turned out afterward that the mummy case from which the grain was taken had been stored in one of the Khedive's stables, and before it was presented to the Duke of Sutherland the seeds (perfectly fresh, Mr. Sowerby declares) had in all probability found their way, either accidentally or out of knavishness, into the imperfectly luted box. Mr. Newberry, indeed, writes to the *Standard* that out of the seeds of thirty species of plants found by him in similar situations not one sprouted. His latest failure was three peachstones (probably of Roman date) disinterred from a tomb at Beni Hasan, in Upper Egypt.

Trade Notes.

It is better late than never,
If you did not advertise
Let it now be your endeavor
And big gains you'll realize!

Let your advertisements have a genuine tone of truthfulness. It will convince the readers that there is reliability in you and your wares.

It is said that in South America an electrical drying machine in which air is forced through a chamber of heated plates is to be used in drying wheat.

A paper cannot be run to suit the individual tastes of its readers. It should be treated as a bill of fare—you take the things you like and leave the things you dislike.

We are indebted to the Union Iron Works for a handsome calendar that would be an adornment to any office—just as the company's manufactures adorn the trade.

J. B. Dutton has completed his new factory buildings at Detroit, Mich., and has removed from 111 and 113 West Congress street to his new quarters at 1026 and 1028 Scotten avenue.

The Robert Aitchison Perforated Metal Company report the outlook better than for some weeks. They have lately closed contracts with several parties in the South and have estimates out on a considerable amount of other work.

W. J. Johnson, manufacturer and dealer in bags at 182 Jackson street, Chicago, reports a good business for the past year. His factory is supplied with every facility for supplying elevator men and millers with bags at satisfactory prices.

D. A. Robinson of Simpson & Robinson has designed a new grain tripper with a perfect automatic self-moving attachment. He has six of them, the first made, in the new annex to Keith & Co.'s elevator at Chicago, where they are giving perfect satisfaction.

A peculiarity of newspaper advertising is that it will compensate for business disadvantages which are hard to get rid of. Your location may be poor, your product unknown, or your competition great, but nevertheless you can use advertising, and do it with the assurance that others so placed have found it profitable.

E. P. Mueller of Chicago has designed a special silo adapted to the preservation of brewers' grains. Mr. Mueller has had many years' experience in handling large quantities of brewers' grain and is thoroughly conversant with the business. His treatise on silos as adapted to the preservation of brewers' grains is an able presentation of the case and will be found very interesting reading.

Much is said of the mystery of advertising, of its subtlety and its uncertainties. It is as simple and certain as daylight, once you think of it in the right way. It is just as simple as hanging up your sign or saying "Here are some fine peaches, Mrs. Jones—20 cents a can." When your ad goes in the paper you are simply hanging up thousands of

signs and speaking to hundreds of Mrs. Joneses. If you can make them believe that your peaches are cheap at 20 cents you have only a little less chance of selling to them as to the particular Mrs. Jones in the store. You can generally make them believe what you say if you are honest. It is as easy to detect a dishonest ad as a dishonest man. Something in the face of the man and the ad tells the story.

DOTS AND DASHES.

Stephen Zapheropoulos, the celebrated Greek grain merchant, is dead.

On November 28 there were 700 cars of wheat sidetracked at Tacoma, Wash.

The earnings of the Minnesota State Grain Inspection Department amounted to \$25,229 in October.

The Phoenix, Ariz., Hay and Grain Company are shipping baled barley straw to California markets.

The railroads have advanced the rates on west-bound grain from 12½ to 15 cents, Chicago to Minneapolis and St. Paul.

An odoriferous skunk got into the Anchor Line Elevator at Erie, Pa., the other day, to the ruination of about 2,000 bushels of grain.

It is probable that reduced rates will be secured for those attending the projected hay dealers' convention at Cleveland, Ohio, in January.

The auction system is being adopted in selling hay. A lot of 1,203 bales was recently disposed of in New York by that system, and good prices were realized.

Kansas farmers make an annual proclamation on the disastrous business of wheat growing and then proceed to recoup with an increased acreage for the following year.

Ten grain cars, lost and without ownership, are said to be floating about on this track and that in Northern Indiana, utilized by any road that may acquire temporary possession.

Farmers about Philadelphia assert that the introduction of trolleys in that city, where they are wont to market their hay, has had a wonderful effect in decreasing their business.

Since shipping commenced this season there has been an almost constant complaint of a lack of cars. Why should not railroads be compelled to furnish adequate shipping facilities?

A boom in the production of rye may be one of the desperate results of the low prices of wheat. It is an easy crop to raise, yields well to the acre on ordinary soil, and the demand is good.

Grain buyers at Sturgeon Bay, Wis., are advising farmers to devote more attention to white peas, there being a good demand for them and but little grown in that section the last year or two.

From recent experiments at the Pillsbury elevator at Minneapolis it was found that in removing smut from wheat by washing, the chief difficulty was in getting the grain dry after washing.

The stock of flaxseed in store at Minneapolis for the week ending December 8 was 53,529 bushels, at Duluth 37,195 bushels, at Chicago 321,106 bushels; in store at Chicago for the same time in 1893, 508,804 bushels.

Although United States markets are said to have disappointed Canadian hay shippers, the product still continues to come from the north. Some Chicago houses are reported as sending representative to Canada, who buy up the hay and ship direct to New York market.

Wisconsin hay dealers report that orders for hundreds of tons of hay to be shipped to Northern points have been canceled since the tariff reduction of \$2 per ton. The cancelation of orders means the purchase of Canadian hay, which sells at \$2 less than the usual United States market price.

During the three months from September 1 to December 1, New York exported 40,094 bags of cloverseed, against 97,616 bags during the same time in 1893. Toledo shipped 26,031 bags and received 59,147 bags. From September 1 to December 7 Baltimore exported 41,360 bushels, against 150,544 bushels in 1893.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since November 15 has been as follows:

November.	NO. 2 RED W. WHT.		NO. 2 SPG. WHEAT.		NO. 2 CORN.		NO. 2 OATS.		NO. 2 RYE.		NO. 2 BARLEY.		NO. 1 FLAX SEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15	56 1/2	57	59 1/2	60 1/2	51 1/2	52 1/2	29 1/2	29 1/2	...	...	...	...	144	145
16	56 1/2	56 1/2	...	...	51 1/2	52	...	...	...	...	55 1/2	55 1/2	144	144 1/2
17	56 1/2	57	...	...	51 1/2	51 1/2	29 1/2	29 1/2	...	...	...	...	144	144
18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	56	57	...	...	50 3/4	50 3/4	29 1/2	29 1/2	...	...	54	54	144 1/2	144 1/2
20	55 1/2	56	...	...	50	50 1/2	29 1/2	29 1/2	...	...	54	54	145	145 1/2
21	55 1/2	56	57 1/2	57 1/2	50 1/2	51	29 1/2	29 1/2	...	...	...	...	147	147
22	54 1/2	55	...	...	50	50 1/2	29 1/2	29 1/2	...	...	...	...	151	152
23	53 1/2	54 1/2	56 1/2	57 1/2	48 1/2	49	28 3/4	29 1/2	...	...	...	...	150	150
24	53 1/2	54	...	...	48 1/2	48 1/2	29	29 1/2	...	...	...	...	148	148
25	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	54	55	...	...	47 3/4	48 1/2	28 3/4	29	48	48	...	...	145 1/2	146
27	54 1/2	55 1/2	...	...	48 1/2	48 1/2	28 3/4	29	48	48	...	...	145	145 1/2
28	54 1/2	55 1/2	...	...	47	48 1/2	29	29 1/2	48	48	...	...	145 1/2	146
29	...	...	...	...	...	...	...	...	...	...	...	...	146	146
30	55	55	55 1/2	60 1/2	47	49	29 1/2	29 1/2	...	...	...	...	146	146
31	55 1/2	56	...	...	46 1/2	47	29 1/2	29 1/2	...	...	...	...	147 1/2	147 1/2
1	...	...	...	...	...	...	...	...	...	...	...	...	148	148
2	...	...	...	...	...	...	...	...	...	...	...	...	148	148
3	55 1/2	56 1/2	...	...	46 1/2	47	29 1/2	29 1/2	...	...	...	...	147 1/2	148
4	56	56 1/2	60	62 1/2	47	47 1/2	29 1/2	29 1/2	...	...	...	...	148	148
5	56	57	59 1/2	62	47 1/2	47 1/2	29 1/2	29 1/2	...	...	...	...	148	148
6	55 1/2	56 1/2	...	...	47 1/2	47 1/2	29 1/2	29 1/2	...	...	...	...	148	148
7	55 1/2	56	59 1/2	62 1/2	47 1/2	47 1/2	29 1/2	29 1/2	49	49	...	...	148	148
8	55 1/2	55 1/2	58 1/2	61	46 1/2	47	29 1/2	29 1/2	...	...	...	...	150	150 1/2
9	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	55	55 1/2	...	...	46 1/2	47	29 1/2	29 1/2	...	...	...	...	151 1/2	153
11	55 1/2	55 1/2	...	...	46 1/2	47	29 1/2	29 1/2	...	...	...	...	152	153
12	55 1/2	56	...	...	46 1/2	47	...	...	49	49	...	...	149	149
13	55 1/2	56	...	...	47 1/2	47 1/2	30	30 1/2	...	...	...	...	146	146
14	54 1/2	55 1/2	...	...	46 1/2	46 1/2	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Holiday. † On Track.

For the week ending November 17 Prime Contract Timothy sold at \$5.45@5.55 per cental; Prime Contract Clover Seed at \$9.00@9.20; Hungarian at \$1.00@1.50; German millet at \$0.75@1.25; buckwheat at \$1.00@1.50 per 100 pounds. Receipts of hay for the week were 3,613 tons, against 2,855 tons the previous week; shipments were 301 tons, against 192 tons for the previous week. The arrivals of all descriptions of hay were only moderate during the week. An active local demand existed, and all consignments met with ready sale. A very firm feeling prevailed and prices advanced about \$1.00 per ton. The inquiry for shipment was fair, but the light offerings restricted trade. The market closed firm and well cleaned up. Sales of No. 1 timothy ranged at \$10.25@12.00, outside for fancy; No. 2, \$9.50@10.50; Mixed, \$8.50@9.00; not graded, \$8.00@11.00; Illinois Upland Prairie, \$7.00@9.00; Indiana, \$6.00@8.50; Kansas, \$9.00 for dark, and \$11.50@12.00 for choice; Iowa, \$6.00@7.00 for coarse, and \$9.50@12.50 for fair to fancy. Oat straw sold at \$4.75@5.50; rye straw at \$4.25 for poor and \$6.00@7.50 for good to choice.

For the week ending November 24 Prime Contract Timothy sold at \$5.55@5.65 per cental; Prime Contract Clover Seed at \$9.20@9.30; Hungarian at \$1.00@1.50; German millet at \$0.75@1.25; buckwheat at \$1.20@1.35 per 100 pounds. Receipts of hay for the week were 4,943 tons; shipments 409 tons. With increased arrivals and only a moderate demand, the market ruled dull during the past week. Buyers purchased very sparingly, merely supplying necessary wants. They were holding off for concessions, which sellers were compelled to grant, and prices gradually declined \$0.50@1.00 per ton. At the reduction a little more inquiry existed and the market closed steady.

For the week ending December 1 Prime Contract Timothy sold at \$5.60@5.65 per cental; Prime Contract Clover Seed at \$9.15; Hungarian at \$1.00@1.50; German millet at \$0.75@1.35; buckwheat at \$1.20@1.35 per 100 pounds. Receipts of hay for the week were 5,127 tons; shipments 1,359 tons. The offerings of timothy hay were only moderate during the past week, and the demand was rather good, principally on local account. A steady feeling prevailed, and prices show no material change. The market for Upland Prairie ruled very dull. Arrivals liberal and demand light. Local dealers gave timothy hay the preference, but the inquiry for shipment was a little more active, and the movement was the largest for some time past. Prices declined about 50 cents per ton.

For the week ending December 8 Prime Contract Timothy sold at \$5.60@5.70 per cental; Prime Contract Clover Seed at \$9.15@9.25; Hungarian at \$1.00@1.50; German millet at \$0.75@1.35; buckwheat at \$1.00@1.30 per 100 pounds. Receipts of hay for the week were 6,596 tons; shipments 793 tons. A very fair inquiry existed for timothy hay during the past week and the offerings were only moderate. The market ruled steady during the early part of the week and later became quite firm. Choice, bright Illinois and Indiana Prairie Hay were in moderate request and a steady feeling prevailed. Coarse and dark lots were very dull. The arrivals of Iowa hay were very heavy and the market ruled very dull. A large proportion of the offerings was of poor quality. For strictly choice grades there was a moderate demand, but coarse and off-color lots were almost unsalable. Prices declined about 50 cents per ton. Sales of No. 1 timothy ranged at \$10.00@11.25 for good to fancy; No. 2, \$9.50@10.00; mixed, \$7.50@8.50; not graded, \$8.00@10.50; clover hay, \$8.50; Illinois Upland Prairie

\$6.50@9.00 for coarse to fancy; Indiana, \$6.00@9.00; Kansas, \$9.75@11.50; Minnesota, \$6.00@8.50; Wisconsin, \$7.50@7.75; Iowa, \$7.50@8.00 for poor and coarse, \$8.50@9.00 for fair to good, and \$10.00@11.00 for choice to fancy; No. 1 Prairie, \$5.75; packing hay, \$5.00; bedding hay, \$5.00. Straw was in large supply and very dull. Wheat straw sold at \$4.50@5.00; oat straw at \$4.50@5.00, and rye straw at \$5.50@7.00.

WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the 23 weeks ending December 8, for the three last years, were as follows:

Articles.	1894.	1893.	1892.
St. Louis.....	8,112,000	10,155,000	21,117,000
Toledo.....	11,949,000	9,568,000	19,447,000
Detroit.....	2,885,000	5,886,000	5,468,000
Kansas City.....	5,524,000	8,815,000	18,214,000
Cincinnati.....	555,000	606,000	1,303,000
Winter.....	29,025,000	35,060,000	65,549,000
Chicago.....	19,962,000	14,438,000	39,076,000
Milwaukee.....	3,639,000	6,542,000	8,511,000
Minneapolis.....	32,667,000	28,117,000	36,385,000
Duluth.....	23,444,900	24,011,000	26,999,000
Spring.....	79,712,000	73,108,000	110,971,000
Total, 23 weeks.....	108,737,000	108,168,000	176,520,000

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the 4 weeks ending December 1, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels...	5,694,604	6,483,960	3,651,030	2,587,955
Corn, bushels....	...	...	...	...
Oats, bushels....	279,400	...	47,990	...
Barley, bushels...	652,246	287,820	1,201,770	254,386
Rye, bushels....	6,536	17,577	32,058	10,292
Flaxseed, bushels.	86,995	74,362	195,096	111,476
Flour, barrels....	756,305	596,296	...	757,281
Output, produced	...	...	...	...
Duluth.....	135,285	135,968	891,132	197,891
Superior.....	260,237	194,338	255,996	...

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the 4 weeks ending December 1, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	60,600	43,800	25,800	27,000
Corn, bushels.....	1,121,050	1,491,500	192,850	392,700
Oats, bushels.....	557,700	1,049,500	557,700	987,250
Barley, bushels.....	313,100	271,600	248,700	242,200
Rye, bushels.....	11,400	9,000	3,000	3,000
Mill Feed, tons.....	390	240	6,436	3,017
Seeds, lbs.....	180,000	120,000	150,000	150,000
Broom Corn, lbs.....	60,000	135,000	60,000	180,000
Hay, tons.....	1,350	5,932	658	1,090
Flour, barrels.....	22,750	15,900	20,100	16,300
Spirits & Liquors, bbls.	2,460	2,385	19,695	22,332
Syrup & Glucose, bbls.	1,200	800	34,628	24,956

BUFFALO'S GRAIN TRADE.

The receipts of grain, flour included, at Buffalo, N. Y., during November were 22,513,074 bushels, against 23,700,026 in November, 1893, and 24,413,763 in November, 1892. The receipts from the opening of navigation to November 30 during the last 13 years were as follows:

	Flour, Barrels.	Grain, Bushels.	Grain, Inc. Flour, Bu.
1894.....	10,752,309	95,432,652	149,104,197
1893.....	9,459,426	129,443,913	176,696,043
1892.....	9,307,470	128,489,752	175,027,102
1891.....	6,592,818	122,535,580	155,499,670
1890.....	5,903,493	87,029,244	116,546,709
1889.....	5,001,855	88,527,557	113,537,832
1888.....	4,978,375	72,501,980	97,393,855
1887.....	3,778,173	82,999,647	101,890,512
1886.....	4,326,346	71,403,223	93,043,953
1885.....	2,783,558	48,909,371	62,827,191
1884.....	2,500,586	55,455,299	67,958,229
1883.....	2,057,731	65,331,567	75,629,222
1882.....	1,791,353	48,546,943	57,503,708
1881.....	...	...	...
1880.....	...	...	...

RECEIPTS AND SHIPMENTS AT DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the 4 weeks ending December 1, as compared with the same period of the preceding year, were, according to Geo. M. Lane, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	223,725	683,742	244,436	375,345
Corn, bushels.....	163,495	112,127	36,137	37,638
Oats, bushels.....	118,962	143,261	7,465	21,611
Barley, bushels.....	102,176	64,562	...	24,906
Rye, bushels.....	4,563	6,458	2,524	7,582
Hay, tons.....	1,300	...	330	...
Flour, barrels.....	12,481	14,649	15,177	8,324

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the 4 weeks ending December 1, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels....	691,474	1,231,800	84,500	145,600
Corn, bushels.....	116,350	263,90	11,300	91,650
Oats, bushels.....	563,000	674,000	766,318	423,155
Barley, bushels....	1,446,945	2,199,260	1,065,759	1,743,949
Rye, bushels.....	84,685	97,200	52,498	83,900
Grass seed, pounds.	290,454	1,838,274	83,750	1,032,116
Flaxseed, bushels...	23,510	59,698	12,135	20,354
Broom corn, lbs....	...	...	...	...
Hay, tons.....	891	1,005	20	119
Flour, barrels.....	214,814	332,039	228,403	286,883

RECEIPTS AND SHIPMENTS AT BUFFALO.

The receipts and shipments of grain and hay at Buffalo, N. Y., during the month ending November 30, as compared with the same period of the preceding year, were, according to Wm. Thurstone, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts by lake.		Shipments by canal.	
	1894.	1893.	1894.	1893.
Wheat, bushels...	6,951,941	5,704,900	2,596,975	3,451,515
Corn, bushels....	1,781,710	5,234,725	528,765	1,467,247
Oats, bushels....	1,682,155	1,605,730	1,114,451	249,222
Barley, bushels...	2,774,073	2,825,088	961,827	952,137
Rye, bushels.....	130,385	57,000	59,636	16,955
Grass Seed, bags..	2,150	11,968	...	...
Flaxseed, bushels.	197,500	1,010,514	...	*37,136,240
Hay, tons.....	...	...	...	...
Flour, barrels....	1,756,047	1,686,650	187	735

* Pounds.

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain at Toledo, Ohio, during the 4 weeks ending December 1, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	675,700	1,058,200	431,700	324,500
Corn, bushels.....	1,034,400	620,500	804,700	6

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Dec. 8, 1894, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany.....		22,000	175,000		39,000
Baltimore.....	1,111,000	549,000	185,000	36,000	
Boston.....	849,000	15,000	373,000	15,000	
Buffalo.....	4,950,000	527,000	197,000	80,000	1,919,000
do afloat.....					
Chicago.....	25,955,000	1,594,000	1,722,000	146,000	29,000
do afloat.....					
Cincinnati.....	20,000	20,000	189,000	9,000	138,000
Detroit.....	1,344,000	18,000	13,000	2,000	18,000
do afloat.....					
Duluth.....	6,177,000		478,000	3,000	64,000
do afloat.....					
Indianapolis.....	240,000	88,000	121,000		
Kansas City.....	1,608,000	100,000	314,000	7,000	
Milwaukee.....	750,000		7,000	25,000	81,000
do afloat.....					
Minneapolis.....	15,147,000	7,000	430,000	33,000	99,000
Montreal.....	712,000	1,000	176,000	6,000	8,000
New York.....	12,640,000	537,000	1,857,000	8,000	3,000
do afloat.....	2,984,000	25,000	1,390,000	57,000	462,000
Oswego.....	45,000	45,000			216,000
Peoria.....	200,000	181,000	287,000	9,000	
Philadelphia.....	1,021,000	82,000	110,000		
St. Louis.....	6,386,000	766,000	754,000	6,000	41,000
do afloat.....	46,000				
Toledo.....	3,234,000	662,000	27,000	1,000	
do afloat.....					
Toronto.....	104,000		15,000		62,000
On Lakes.....	408,000	1,361,000	240,000		409,000
On Canals.....	47,000		88,000		
On Miss. River.....					
Total.....	85,978,000	6,600,000	9,146,000	453,000	3,582,000
Corresponding date, 1893.....	78,783,000	6,150,000	4,011,000	580,000	2,873,000

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector George P. Bunker the grain received at Chicago during the month of November, 1894, was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.				No Grade.
	2	3	4	1	2	3	1	2	3	4	
C. B. & Q.....					4			83	25	1	7
C. R. I. & P.....					5	2		13	27		
C. & A.....					45	24		56	56	5	15
Illinois Central.....	2				9	15		188	110	10	9
Freeport Div.....								1			
Galena Div. N. W.....								3	1		
Wis. Div. N. W.....											
Wabash.....					2			154	97	2	1
C. & E. I.....								193	71		3
C. M. & St. P.....								3	3		
Wis. Cent.....											
Gr. Western.....						5		21			4
A. T. & S. Fe.....					15	81		21	40	18	12
Through & Spec.....	4	3			87	4		1,102	139	4	
Total each grade.....	4	5			165	133		1,838	569	40	51
Total W. wheat.....											2,805

SPRING WHEAT.

Railroad.	Colorado.					No Grade.	White.		Mixed Wheat.
	2	3	2	3	4		2	3	
C. B. & Q.....			2	1					
C. R. I. & P.....				3					
C. & A.....									
Illinois Central.....									
Freeport Div.....									
Galena Div. N. W.....	45	4		1					
Wis. Div. N. W.....									
Wabash.....									
C. & E. I.....									
C. M. & St. P.....									
Wis. Cent.....									
C. Gr. Western.....									
A. T. & S. Fe.....									
Through & Special.....		148							
Total each grade.....	45	4	150	5					
Total sp. wheat.....	49							155	

RYE.

Railroad.				No Grade.
	1	2	3	
C. B. & Q.....		15	2	
C. R. I. & P.....		4	1	
C. & A.....			2	
Illinois Central.....				
Freeport Div.....		3		
Galena Div. N. W.....		9		
Wisconsin Div. N. W.....		20		
Wabash.....		1		
C. & E. I.....			2	
C. M. & St. P.....		17	1	
Wisconsin Central.....		4		
C. G. Western.....		8		
A. T. & S. Fe.....				
Through & Special.....		5	3	1
Total each grade.....		86	11	1
Total rye.....				98

CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C. B. & Q.....	147	110	17	6	114	98	206	5
C. R. I. & P.....	69	36	6	4	81	24	79	
C. & A.....	116	263	15	108	87	456	419	13
Illinois Cent.....	241	1,362	60	362	99	522	442	46
Freeport Div.....	19	7	2		9	4	8	
Gal. Div. N. W.....	22	10	1		15	1	19	2
Wis. Div. N. W.....	2						1	
Wabash.....	75	528	29	291	23	392	261	80
C. & E. I.....	12	138	8	127	31	332	251	6
C. M. & St. P.....	6	1				4	4	4
Wis. Central.....					88	2	6	
C. G. Western.....		3						
A. T. & S. Fe.....	41	83	19	9	110	67	128	17
Thru'g & Spl.....	120	401	10	25	19	148	159	8
Total each grade.....	870	2,942	167	932	676	2,050	2,013	181
Total corn.....								9,831

OATS.

Railroad.	White.			2	3	White Clipped.		No Grade.
	1	2	3			1	2	
C. B. & Q.....		349	87	112	11			8
C. R. I. & P.....		66	114	32	40			2
C. & A.....		33	16	73	26			9
Illinois Central.....		95	101	122	28			1
Freeport Div.....		83	39	7	8			
Galena Div. N. W.....		144	107	70	12			1
Wis. Div. N. W.....		100	12	5	7			
Wabash.....		64	8	38	16			1
C. & E. I.....		53	39	107	47			1
C. M. & St. P.....		173	104	59	17			
Wisconsin Central.....			1					
C. G. Western.....		50	51	18	15			
A. T. & S. Fe.....		54	24	18	5			3
Through & Special.....		78	20	45	8			1
Total each grade.....		1,342	723	706	240			27
Total oats.....								3,040

BARLEY.

Railroad.	Bay Brewing.		Chevalier.		3	4	5	No Grade.	Total No. Cars all grain by Roads.
	3	3	2	3					
C. B. & Q.....			50	36	2	1			1,499
C. R. I. & P.....			9	98	15				734
C. & A.....									1,837
Illinois Central.....									3,824
Freeport Div.....				53	6	2			251
Galena Div. N. W.....				115	9				587
Wis. Div. N. W.....			208	212	45	4	26		646
Wabash.....									2,063
C. & E. I.....					1				1,452
C. M. & St. P.....			127	276	12	10	8		829
Wisconsin Central.....			1	5	22				33
C. G. Western.....			12	130	11	1			425
A. T. & S. Fe.....				3					768
Through & Special.....				22	4	2			2,570
Total each grade.....			407	950	127	20	36		
Total barley.....							1,540		
Total grain.....									17,518

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during November, 1894 and 1893, of seeds, hay and broom corn:

Repts.	Timothy lbs.	Clover lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1894 ..	2,902,695	805,892	368,749	537,121	1,101,717	17,999
1893 ..	4,930,930	2,352,303	977,769	1,477,273	6,030,430	31,306
Shipts.						
1894 ..	635,738	1,047,860	236,043	221,103	405,205	2,477
1893 ..	2,758,738	2,855,468	266,955	993,749	1,751,025	5,969

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending December 8, as compared with same weeks last year, have been as follows:

	For the week ending Dec. 8.		For the week ending Dec. 1.	
	1894.	1893.	1894.	1893.
Wheat, bu.....	1,042,000	712,000	629,000	691,000
Corn.....	187,000	1,218,000	174,000	710,000
Oats.....	9,000	20,000	5,000	10,000
Rye.....	8,000			
Flour, bbls.....	220,000	281,000	257,000	230,000

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month ending November 30, as compared with the same period of the preceding year, were, according to Geo. H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	494,650	856,700	269,443	769,413
Corn, bushels.....	866,600	1,805,300	152,176	1,403,760
Oats, bushels.....	652,300	618,200	140,587	329,353
Barley, bushels.....	357,750	510,000	8,863	10,226
Rye, bushels.....	7,000	43,400	12,498	47,984
Hay, tons.....	9,260	12,980	1,246	3,839
Flour, barrels.....	88,486	82,462	167,516	183,784

FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the 16 months ending with November, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1894-95.	1893-94.	1894-95.	1893-94.
August.....	1,360,250	414,700	429,373	341,609
September.....	751,300	1,881,550	375,623	1,195,733
October.....	801,350	2,340,800	351,833	1,810,110
November.....	426,800	1,178,650	143,733	887,708
December.....		493,900		383,932
January.....		183,700		186,674
February.....		59,400		142,645
March.....		44,000		92,050
April.....		129,464		60,423
May.....		128,269		72,463
June.....		48,400		73,607
July.....		190,850		38,547
Total.....	3,339,700	7,093,683	1,300,562	5,285,498

ELEVATOR AND GRAIN NEWS

Windsor, Ill., will soon have a \$10,000 elevator.

A \$25,000 elevator will be erected at Benson, Ill.

A brewery may be built at Callicoon Depot, N. Y.

E. C. Peaslee will erect a brewery at Dubuque, Iowa.

Munday & Carew are building an elevator at Litchfield, Ill.

John P. Wrenn is erecting a new grain elevator at Roanoke, Ill.

J. A. Hubbard is in the grain and feed business at Bridgman, Mich.

Frank Horsting is now carrying on a grain business at Vincennes, Ind.

P. Philipps & Co. will erect a 25,000-barrel brewery at Punxsutawney, Pa.

Heims Brewing Company of East St. Louis, Ill., will erect a brew house.

The new Porter Grain Warehouse at Springer, N. M., is about completed.

Grecian & Hackrot, grain dealers at Alton, Kan., have succeeded I. Grecian.

Wheeler & Burns of Easton, Maine, are building a starch factory at Mars Hill.

The Norfolk, Va., Brewing Company will soon commence the erection of a brewery.

A. R. Cline, formerly of Edelstein, Ill., has started in the grain business at Chicago.

The new 40,000-bushel elevator at La Grande, Ore., is finished and crowded with grain.

The total capacity of the public elevators in Minneapolis, Minn., is 22,845,000 bushels.

The Ivesdale Grain Company of Ivesdale, Ill., has been succeeded by Foohey & Dickinson.

A company has been organized at St. Johns, Ohio, for the purpose of erecting an elevator.

The Winona, Minn., Mill Company's new elevator is now completed. It is run by electricity.

E. D. Tillson intends to build an elevator and storehouse at the flour mill at St. Thomas, Ont.

Randall Bros. & Co., grain and hay dealers at Philadelphia, Pa., have dissolved partnership.

The Louisville, Ky., Malting Company has been incorporated with a capital stock of \$25,000.

J. C. Bare has succeeded to the grocery and elevator business of C. F. Mosher at Media, Kan.

Ira Felger is about to erect grain offices at Jeromeville, Ohio, and engage in the grain business.

Quinn & Nolan will make improvements and additions to their brewing plant at Albany, N. Y.

The Carondelet Mill Company has decided to erect a 10,000-bushel feed elevator at St. Louis, Mo.

T. E. McFarlin, a progressive grain dealer at Sabetha, Kan., is doing a rushing business in feed.

A 75,000-barrel brewing and malting plant will be erected at Great Falls, Mont., at a cost of \$250,000.

The Highland Brewing Company of Springfield, Mass., will build additions to their storage building.

There is a movement on foot at Wheeling, W. Va., for the organization of a company to erect an elevator.

R. P. Roblin has bought McBain's elevator at Morden, Man., and placed Alexander Lawrence in charge.

It is reported that 4,000,000 bushels of grain were taken to Port Huron, Mich., by boat the past season.

J. A. Conant has bought the elevator at Exline, Ill., and is carrying on a grain and general store business.

William Hogsett has purchased the farmers' elevator at Macomb, Ill., and will carry on a grain business.

John P. Litchfield is erecting a 40x50-foot elevator at Lacon, Ill. Gannon & Henning are the contractors.

The Bloomfield, Neb., elevator has added a feed grinding plant and is doing an extensive business in feed.

George Watkins and W. B. Buell have started in the grain business at Buffalo, N. Y., under a partnership.

The Public Stock and Grain Exchange of Pittsburgh, Pa., is rated among the fraudulent by the post-office department. A number of would-be speculators

have had their letters to this concern returned marked "Bogus."

Kelley & Lysle are building a new grain and flour warehouse for their flour mill at Leavenworth, Kan.

J. P. Gibbons & Co. have opened a grain warehouse at Kearney, Neb. They deal in grain, hay, feed and flour.

J. W. Jordan and George Pierce have started in the grain business at Fisher, Ill., under the firm of Pierce & Co.

The closing of navigation leaves the Ft. William, Man., elevators with only 322,569 bushels of wheat in store.

The Peacock Elevator at Rolling Prairie, Wis., took in over 10,000 bushels of barley in one week recently.

The Cleveland Grain Company intends to erect an elevator at Morristown, Ind., of 75,000 bushels' capacity.

The Muench Brewing Company of Appleton, Wis., will rebuild their plant, which was recently destroyed by fire.

Eversole Bros., grain dealers, have established a branch office at Kemp, Ill., with J. H. Eversole in charge.

The Best Brewing Company of Chicago will erect a brew house of 100,000 barrels' capacity and other additions.

E. Adams will erect a grain warehouse at Great Barrington, Mass., to accommodate his increased business.

A project is on foot looking to the establishment of a 30,000-bushel farmers' elevator at South Edmonton, N. W. T.

Geo. W. White is operating the Jordan Elevator at Fairfield, Iowa, and deals in grain, seeds, baled hay and straw.

Brown & Co. of Lovington, Ill., have sold their elevator and grain business to the Hardware Bank of that place.

The David Stevenson Brewing Company intend to make alterations in their storage building at New York City.

Henry Torpin & Son are about to erect a large elevator at Nickerson, Neb., and will operate same when completed.

Brandt, S. D., shipped six cars of grain in one day recently, and asks: "How is that for a small town like Brandt?"

The Grand Rapids, Mich., Brewing Company will tear down the old Kusterer brewery and erect a modern plant.

The Farmers' Elevator Company of Hoopston, Ill., has added to its storage capacity by the addition of a line of cribs.

The C. Kern Brewing Company will rebuild their plant at Port Huron, Mich., which was recently destroyed by fire.

Laughlin McPhee, a grain buyer at Whitewood, N. W. T., who forged a check for \$76, recently jumped his bail.

The Winona Mill Company will erect a new elevator at Mankato, Minn., to take the place of the one burned recently.

There are three elevators at Atchison, Kan., the largest being the 250,000-bushel house of the Greenleaf Baker Company.

J. M. Dunlap, whose elevator at Haysville, Ohio, burned last August, has just started his new elevator at the same place.

C. Meyer, J. A. Darby and H. L. Babbitt have formed a company and will deal in grain and hay at Jacksonville, Fla.

Edward Baldwin and others will erect an elevator at Weston, Ohio, to take the place of the one destroyed by fire some time ago.

West Wilson of Traer, Iowa, has filled his elevator with oats and closed it up with the intention of waiting for a rise in prices.

O. A. Lundquist and W. E. Deutsch have formed a partnership and will open a grain, hay and produce store at Telluride, Colo.

It is reported that S. H. Smith, a Chicago grain inspector, is contemplating the erection of a large elevator at Carbondale, Ill.

E. L. Bleistine, grain dealer at Myerstown, Pa., is reported as doing an immense business receiving and shipping bran and grain.

Glasgow & McLean have completed their large grain warehouse at Davenport, Wash., and are already doing a rushing business.

E. M. Sloan, grain buyer at Fairfield, Wash., for J. Q. Adams & Co. of Seattle, has been arrested on a charge of defaulting. It is claimed that Sloan has

turned in false reports and obtained over \$2,000 from his employers for transactions that had never been made.

Richmond Bros. have recently completed a new elevator which they will operate in connection with their flour mill at Oxford, Maine.

Geo. M. Irwin, wanted by Pittsburg bucket shop investors for alleged swindling in grain speculation, has been arrested in New York.

C. D. Stevens, formerly general agent of the Great Northern at Victoria, B. C., has left the railroad to engage in the grain business.

The Northern Elevator Company's elevator, which recently burned at Portage la Prairie, Man., will not be rebuilt until next year.

The new Union Elevator at Chicago has been declared regular by the Chicago Board of Trade. Its capacity is 750,000 bushels.

The John Eichler Brewing Company of New York City will make alterations to brewery and storage buildings at a cost of \$5,000.

The Garden City Grain and Produce Company has been organized at Chicago by J. E. Smith, Jefferson Sinclair and Albert Johnson.

The Van Winkle Grain and Produce Company has been incorporated at Paterson, N. J., with an authorized capital stock of \$25,000.

The Tacoma, Wash., Warehouse and Elevator Company intends to add a No. 4 Iron Prince Smut Machine to the equipment of its house.

Bird & Davis have embarked in the business of dealing in grain, feed and flour at Tacoma, Wash. Geo. W. Bird is the head of the firm.

A new elevator will be built at Mankato, Minn., in place of the Northwestern, which burned recently. Work will commence in the spring.

Hartman & Markward have leased the Fitch Elevator at Warrensburg, Mo., which will add 50,000 bushels to the company's storage capacity.

William Knox, dealer in grain, flour and feed at Brandon, Man., has sold out to Joseph Priestly and R. McKay, who will continue the business.

Murdock, Barbar & Co. of Toronto have submitted a plan to the Duluth Board of Trade for shipping grain direct from Duluth to Manchester.

Mike Ott has purchased the elevator at Wilton, Iowa, from Jas. S. Rowe and will enter the grain business. Mr. Rowe will buy and ship live stock.

Isaac Johnson has purchased the business in grain, hay, etc., of J. C. Dougherty & Co., at Marquette, Mich. Mr. Albert Johnson will be the manager.

The case of Miller vs. Southworth & Co., grain dealers, to recover some \$3,000 lost by the plaintiff in grain speculation, is being tried at Toledo, Ohio.

The Altoona Farmers' Elevator Company, Limited, of Altoona, Ont., has been incorporated with a capital stock of \$5,000 divided into shares of \$50 each.

December 6 the price for shelling ear corn at the C., H. & D. elevators at Toledo, Ohio, was advanced to 1 cent per bushel. Elevation as before, $\frac{1}{2}$ cent.

Scholes Bros., dealers in grain and coal at Greenfield, Iowa, have sold out their coal business and will hereafter devote their attention to the grain trade.

The Buell Grain Company has been incorporated at Chicago with a capital stock of \$10,000. Incorporators, Harry O. Buell, David H. Harris and Fred S. Smith.

Charles Caffyn, grain dealer, and a flour mill company at Leiter's Ford, Ind., have declared war. Mr. Caffyn has built a flour exchange building at his elevators and will deal in that product at cut prices.

The Bosch-Ryan Grain Company of Savanna, Ill., has put in a complete electric light plant which makes its entire building from top to bottom as light as day.

Buckley, Purseley & Co. are contemplating the erection of an elevator at Colchester, Ill. This company has made a considerable increase in its business this year.

The directors of the Inter-Mountain Milling Company of Salt Lake City, Utah, have placed in operation the Salt Lake Mill and Elevator Company's plant.

John Thompson's elevator at Colchester, Ill., is said to be doing an immense business, farmers coming from a distance of 15 to 20 miles because of favorable prices.

Gagan & Cooley, grain dealers of Grand Forks, N. D., bought 25,000 bushels of the wheat damaged in the recent St. Anthony and Dakota elevator fire at Beltrami.

At a recent meeting the Davenport, Iowa, Malt and Grain Company elected the following officers: Henry Klindt, president; Claus Stoltenberg, vice-president; Charles Pasche, treasurer; C. H. Meler, secretary. The following directors were elected: Peter Fedder-

son, Alec Stockdale and Herman Wulf. A 7 per cent. dividend was declared for December 31.

Watkins & Co., grain dealers at Sheldon, Ill., are carrying on a prosperous and growing business under the efficient management of Charles G. Watkins.

The Farmers' Elevator Company at Portage la Prairie, Man., held a meeting December 6 and elected a board of directors in place of those who resigned recently.

Adolphus Busch of St. Louis, Mo., recently purchased of the W. P. Orthwein Grain Company 400,000 bushels of barley for a consideration of about \$250,000.

The American Rice Company, Limited, has been incorporated at New Orleans, La., to clean and mill rice, etc. The capital stock is \$5,000. R. G. Guerard is president.

Charles Chase, formerly in the employ of O. B. Burnham, grain dealer of Beverly, Mass., has been arrested on the charge of embezzlement from Mr. Burnham.

Joseph Dreyfus & Son, grain dealers in London and Paris, suspended recently. The company has no connection with Dreyfus Freres & Co., the well-known grain men.

W. F. Merriman will be local manager and grain buyer of Spellman & Bock's new branch at Williams-ville, Ill. Offices and cribs are being built and scales will be put in.

John W. Yeazel has built a large corn elevator in connection with his flour mill at New Moorefield, Ohio. The elevator has a capacity for shelling 2,000 bushels per day.

Phillipps & Richardson, grain dealers at Bagot, Man., intend to change from horse to steam power, for which an engine will be installed. A grain cleaner will also be put in.

Grain inspectors at West Superior, Wis., have been furnished with the accommodation of an inspection house where they have desk room and a comfortable time in cold weather.

The Robert Portner Brewing Company is making extensive improvements to its plants at Alexandria, Va. The new malt storage elevator will have a capacity of 30,000 bushels.

Grain men at Minneapolis are complaining that the present inspection of flaxseed is too rigid, the oil men claim the opposite, and the railroad commission is left to decide the question.

The grain receipts at some of the small towns of Washington are large this season. The receipts of wheat at St. John are reported as about 300,000 bushels, and the same at Almoda.

The Listman Mill Elevator at La Crosse, Wis., will be completed by the end of this month. It will increase the storage capacity to 110,000 bushels, which was formerly 24,000 bushels.

The Garrison Milling and Elevator Company has been incorporated at Denver, Colo., with a capital stock of \$20,000. The incorporators are J. K. Mullen, A. S. King and C. H. Wilkin.

Sylvester C. Smith has brought suit against Tromanhouer Bros. of Minneapolis to recover \$10,000 damages on account of injuries received from a fall while at work on an elevator.

Austin & Zimmerman, grain dealers at Seattle, Wash., have dissolved partnership. G. F. Zimmerman continuing the business. Mr. Austin may go into the grain business at Portland, Ore.

The Council Bluffs, Iowa, Elevator Company is handling several varieties of a stock feed mixture made from what is left of corn after it has been used in the manufacture of glucose.

The Minnesota Valley Roller Mills and Elevator Company of Le Sueur, Minn., has filed articles of incorporation with a capital stock of \$30,000. The mill has a capacity of 225 barrels daily.

The elevator being erected at Bloomington, Ill., by Carrington, Hannah & Co., will, it is claimed, be one of the best equipped elevators in that part of the state. Its capacity will be 130,000 bushels.

Although wheat shipments from Seattle, Wash., are said to be behind other years so far this season, it is expected that the shipments for the entire season will far exceed those of any former year.

Mackinaw, Ill., is a live little town with good shipping facilities, two railroads to Peoria, lots of grain, but no grain merchant. This is said to be a promising point for a wideawake grain man.

The business men of Oxford, Ohio, are agitating for a grain and stock dealer to locate in that town. They say that all business is going to College Corners, and that there is a good opening in Oxford.

The annual report of the Chicago Brewing and Malting Company for the year ending Sept. 30, 1894, shows that the net earnings of that company applicable to dividends were \$260,865, equivalent to between

1 and 2 per cent. on the ordinary shares after deducting the \$250,000 required to pay the 8 per cent. dividend on the preferred shares.

H. A. Cadwallader, grain, coal and salt dealer at West Lebanon, Ind., is doing a very good business. He writes us that he has purchased the elevator at West Lebanon and will hereafter operate it.

The Newport, Tenn., Mill Company is erecting a large elevator and storehouse to be operated in connection with the mill. Machinery has been ordered from the Case Manufacturing Company.

J. A. Thomas, representing the General Fire Extinguisher Company, will equip the elevator of the La Grange Mill and Elevator Company at Red Wing, Minn., with Grinnell Fire Extinguishers.

The grain commission firm of C. H. Spencer & Co., which has had offices at Duluth, Minneapolis and Superior, has closed its branches at Duluth and Superior on account of the very slow business doing.

Eekhout, McLean & Co., grain and lumber exporters at Baltimore, Md., have dissolved partnership, both retiring from business. Mr. Eekhout recently married a member of the Vanderbilt family.

The Lamberton Elevator Company's new house at Simpson, Minn., is about completed. A gasoline engine will supply the power, and the elevator will be a model in convenience and improved machinery.

E. J. Martz, grain dealer at Weston, Ohio, has brought suit against the C. & D. Railroad Company for \$7,700 for the burning of his elevator, which was set on fire by a spark from a passing engine.

The Pacific Elevator Company has been incorporated at Los Angeles, Cal., with a capital stock of \$500,000. Directors: G. L. Chapman, W. M. Bowen, T. M. Martin, L. B. Pemberton and C. C. Bowen.

The Siding Elevator Company of Demick township, La Salle county, Ill., has been incorporated with a capital stock of \$1,500. Incorporators, O. T. Collins, Charles Kentzer, T. A. Pottinger and John Cleer.

The Vicksburg Cotton Seed Oil Mill has been purchased by Lever Bros., Limited, of London, England. The plant has a daily capacity of 100 tons. It has been idle for some time, but will be started immediately.

It is reported that the milling firm of Mackay & Co. of Ottawa, Ont., contemplate building a 700,000-bushel elevator at Prescott, Ont., as a rival house to the one at Ogdensburg, N. Y. It is to cost about \$150,000.

The Brighton Milling and Elevator Company of Brighton, Colo., has filed articles of incorporation. The incorporators are Louis Wickhaish, Andrew Hagus, J. Henry Stolz, George W. Hazzard and Fred P. Watts.

The Oneida Elevator Company has been incorporated at Oneida, Ill., with a capital stock of \$2,600. The incorporators are J. A. Finley, Benjamin Dayton, A. F. McCormack and others, and they will deal extensively in grain.

C. Merrill and R. M. Riggs have purchased the interest of Louis Merrill in the grain firm of the Merrill & Clayton Company at Cabery, Ill. The new firm is composed of Samuel and Alfred Clayton, R. M. Riggs and Clinton Merrill.

O'Connor Bros. of Washburn and Raymond, Iowa, have leased the grain and coal business of Coonrad & Co. of Jesup, and J. J. O'Connor has taken charge. There are five of the O'Connor brothers in the business at different points.

Bartlett, Kuhn & Co., grain dealers of Evansville, Ind., are about to begin the erection of a 350,000-bushel grain elevator at Terre Haute. The building will cost over \$50,000 and will be one of the largest and best elevators in the state.

The Grain Mercantile Company has been incorporated at Hector, Minn., with a capital stock of \$12,000. The incorporators are Alexander Stewart, Sylvester S. Cargill, William H. Wheeler, A. E. Benedict, Charles E. Deaver, all of Minneapolis.

It is said that on account of the settling of the docks at Tacoma, Wash., the large elevators are in great danger of pitching into the water. Even if not propped up by country barn builders, a house can hardly stand earthquakes and tidal waves.

The Listman Mill Company's elevator at La Crosse, Wis., for which the contract has been let, will have a capacity of 100,000 bushels. It will be fitted with power shovels, car puller, and dust collector and fan for handling screenings and dust to be used as fuel.

The Freeman Elevator at Superior, Wis., is completed, and an addition of 300,000 bushels made to the elevator capacity of that city. The house is one of the largest ever built as an adjunct to a flouring mill. The LeDoux-Moore Company had the contract.

An action has been taken against Mr. Bourne of Portage la Prairie, Man., who was manager of the Farmers' Elevator at Burnside last year, in consequence of a shortage amounting, it is alleged, to 1,000 bushels in a quantity of grain stored in the elevator

for R. P. Roblin. Mr. Bourne claims that the shortage was caused by over-shipping to another dealer named Anderson, but Anderson claims that he bought the grain from Mr. Bourne and paid for it.

The Harper-Menefee Grain Company has been incorporated at Kansas City, Mo., with a capital stock of \$6,000. The company will carry on the business of buying and selling grain, hay and seeds. P. B. Harper, R. C. Menefee and B. F. Paxton are the incorporators.

During the five weeks from November 3 to December 1 1,024 cars of wheat were inspected at Winnipeg, against 967 cars inspected during the five weeks from Nov. 3 to Dec. 1, 1893. Considerable of the wheat moving is inspected at Ft. William, and is not given in these figures.

The Pneumatic Steel Warehouse Company of Chicago has elected the following officers: President, John Hill Jr.; vice-president, R. S. Lyon; treasurer, William Nash; secretary, L. La Rue Smith. The directors are H. F. Dousman, L. La Rue Smith, William Nash, R. S. Lyon and John Hill Jr.

An attempt was made to burn the St. Paul Elevator and Warehouse at Milwaukee, Wis., on the night of November 24. A pile of inflammable material was placed between the elevator and an adjoining shed. It was discovered before the match was applied, however, and a corps of watchmen was put on guard.

The grain firm of A. B. Taylor & Co. of Minneapolis has been dissolved, Mr. Taylor retiring. Mr. Taylor is a pioneer grain merchant of the Northwest and was well known in grain trade circles. His health compels him to seek a milder climate. The business of the company will be turned over to F. V. Haven.

C. C. Rogers & Co., grain and stock dealers of Milwaukee, Wis., have succeeded to the business of Rogers & Knowles. The members of the firm will be C. C. Rogers, Carroll Atwood and F. W. Rogers. George Knowles, the retired member of the old firm, will form a partnership with Warren Gee in the same business.

The Wisconsin Malt and Grain Company of Appleton, Wis., are adding to the capacity of their plant and increasing their power. They have just placed a 150-horse power Corliss Engine, manufactured by the Nordberg Company, and a 72-inch boiler of 150 horse power. This gives an engine power of 200 horse power and boiler power of 230 horse power.

Farmers near Leonard, N. D., have organized a company for the establishment of a starch factory with a capacity of 1,000 bushels per day, which means an output of about 9,000 pounds of starch per day. For a long time farmers have threatened to take the starch out of the grain dealers, though firmly believing in a stiffening in the price of their own grain.

The Midway Elevator Company of Minneapolis has its new 75,000-bushel elevator completed and receiving wheat. The company had already bought enough wheat to arrive to almost fill the house, but it was resold at a margin sufficient to pay insurance and interest on money invested in the elevator for a year. Honstain Bros. had the contract for the building of the new elevator.

At a meeting of the principal western roads having lines in Iowa, held in Chicago, December 7, it was unanimously agreed that commencing January 1 they would discontinue all proring or making of through rates on grain and its products from Northern Illinois and Iowa territory west of the Mississippi, to Central Traffic Association territory, including the terminals of the Western trunk lines.

George Taylor, a fireman in the Sanborn Elevator at Port Huron, Mich., has brought suit against the schooner B. L. Pennington for \$5,000 damages for injuries received. The schooner was discharging at the elevator and Taylor fell head first into an open hatchway when walking across the deck. He was unconscious for five days after the accident and claims that he has never fully recovered.

An order has been entered in court at Chicago for the sale of the Neeley grain elevator to the Nebraska City Packing Company for \$233,000. A. E. Neeley objected to the entry of the order, asking for a stay of proceedings until he could raise money to discharge his obligations and regain possession of his property, which he lost in a foreclosure suit some time ago. His objection was overruled, the judge saying that he regretted very much to have to so decree.

When Neal Bros. & Co. of Portland, Ind., failed they had about 40,000 bushels of wheat belonging to farmers, and about 12,000 bushels belonging to local and near-by grain dealers. That is, they had it, yet they didn't, because they had shipped it. The assets are nil, an ex-member of the firm having taken the mill and book accounts to satisfy his claims against the firm. On the day of failure the following notice was given out: "On account of the hard times and consequent losses we have sustained and the refusal of some of our heaviest creditors to give us further time, the firm of Neal Bros. & Co. has been compelled to stop the operation and management of the Centennial Mills at Portland, Ind., which will hereafter be under the control and management of Rufus Neal. We in-

tend to do the best we can for our creditors. We have made every effort in our power to weather the financial depression but failed, which no one can regret more than we do."

At a meeting of the Chicago and Northwest Granaries Company in London, England, November 20, it was recommended that a dividend of 8 per cent. on preferred and of 5 per cent. on the common stock be made for the year ending July 31. There were available funds sufficient to pay \$12,500 debenture bonds and put \$35,000 in the reserve working capital fund and \$2,500 to the following year's profit and loss account. This was the most profitable year in the company's history. The company is an English corporation, controlling the elevators of G. W. Van Dusen & Co. and the Star Elevator at Minneapolis.

The Brooklyn Wharf and Warehouse Company is said to have been organized to control all the warehouses, docking facilities and elevators in Brooklyn. The capitalization is \$20,000,000 of first mortgage 5 per cent. 50-year gold bonds, \$5,000,000 of 6 per cent. cumulative preferred, and \$5,000,000 common stock. The securities will be used to pay for the property and also supply a working capital of \$500,000. The officers were given as Thomas A. McIntyre, president; David Dow Jr. and J. S. T. Stranahan, vice-presidents, and William A. Nash as treasurer. Late reports say, however, that while the scheme is being worked up it has not come to a head.

J. F. White & Co. of New York and Dundee has brought suit against R. Davie & Son, sack merchants of Liverpool, to recover damages for breach of warranty that certain bags supplied should be eligible for free entry into the United States. The plaintiff's case was that in March, 1893, he bought from Mr. Watson, the defendants' American agent, a quantity of cental bags "warranted eligible for free entry under existing laws of the United States." The shipments were to be 50 bales a month for May and July, and a third of the quantity was shipped in the Tauric and duly passed the American customs, but the lots by the St. Enoch and the St. Ronans were stopped and duty was demanded on the ground that the sacks were not of American manufacture.

A. Reed has brought suit against the Stanislaus Warehouse Company to recover the value of wheat burned in the fire that destroyed the Claribel Warehouse, between Oakdale and Waterford, Cal., in November, 1892. There were 4,000 tons of wheat in the warehouse, worth at that time over \$100,000. Reed owned 62,370 pounds of the grain destroyed, for the loss of which the defendant corporation refuses to compensate him. He alleges that the fire was due to the negligence of the defendant, in that no watchman was provided although a frame annex of the warehouse was notoriously occupied by tramps, who built fires therein and about, etc. Plaintiff asks for \$779,624, the value of the wheat, interest at 7 per cent. from date of the fire, costs and attorney's fees.

F. Abascal & Co., a Cuban firm which claims to have been damaged to the extent of \$32,000 by a breach of contract on the part of Connor & Bros., grain merchants of St. Louis, Mo., has petitioned the courts to have the arbitration board, appointed by the parties concerned, set aside. In acting on the matter the arbitration board had awarded Abascal & Co. \$1,775 damages. The suit grows out of a contract alleged to have been made between the Connor Grain Company and the Cuban firm, by which the defendants in the above suits were to have furnished 6,000 sacks of corn (valued at \$10,000) to Abascal & Co., with the understanding that the grain would be delivered to them in seven days. The agreement was made, it is said, because of the fact that the Spanish government was about to increase the duty on corn \$3 50 per sack. The corn, however, did not arrive, and the duty was raised, and the Cuban firm, in anticipation of the arrival of the grain, made certain offers, were damaged thereby, so they claim, to the extent of \$32,000.

The formal transfer of the Superior Elevator Company and the Union Improvement and Elevator Company to the Consolidated Elevator Company of Duluth, Minn., took place November 16, and organization of the latter company was perfected by the election of M. J. Forbes of Duluth, president and general manager; George B. Cooksey of New York, vice-president; A. F. Hepworth, secretary and treasurer. The executive committee were elected as follows: Spencer, Forbes, Cooksey and Mair. Directors: M. J. Forbes and George Spencer, Duluth; Clarence H. Clark, Philadelphia; Charles A. Mair, Chicago; Forrest H. Packer and George B. Cooksey of New York; George Ripley and Theophilus King of Boston, and E. W. Pet of St. Paul. All of the above named gentlemen were present at the meeting. This winds up the receivership for the two Duluth companies, and the new concern starts out without prejudice and with a most capable manager at the helm. All warehouse receipts of the old companies will be honored by the Consolidated. The indebtedness of the old companies has been fully paid.

Well begun is half won—in business and everything else. Begin by subscribing to the AMERICAN ELEVATOR AND GRAIN TRADE and the *Hay Trade Journal*, weekly, for \$2 per year. All hay markets reported weekly.

THE EXCHANGES

The Chicago Board of Trade has decided to close December 24 and 25 for a Christmas holiday.

Two tickets of membership to the New York Produce Exchange sold at auction at \$415 and \$425 recently.

Members of the Chicago Board of Trade seem to like the new rule which compels them to give names of principals, but some of them pay no attention to it, it is said. The directors are taking measures to enforce the rules.

The executive committee of the Baltimore Corn and Flour Exchange is taking measures to enforce the rules prohibiting members from entering into business negotiations with non-members on 'Change, which some are said to be doing.

The assessment of members of the Chicago Board of Trade is to be \$100 for 1895, more than double that of last year and the heaviest ever imposed. The extra assessment is to meet unusual expenses, and in 1896 it will probably come down again.

The Winnipeg Grain Exchange recently adopted a resolution to the effect that No. 1 Manitoba Hard should be maintained according to the standard of this year, and that no mechanically scoured wheat should go into that grade, said regulation not to apply to the present crop.

The new clearing house recently established in connection with the Baltimore Corn and Flour Exchange has been giving grain men such little satisfaction that a petition signed by some leading firms advocating its abolition and a return to the old system has been presented to the directors of the Exchange.

The trouble between the Chicago Board of Trade and Murry Nelson is settled for a time. The National Elevator is now irregular, and its owner suspended from the Board for uncommercial conduct. The action of the Board of Trade was upheld by the court, but Mr. Nelson has appealed his case.

The members of the Duluth Board of Trade have been considering the question of the abolition of the 1-cent commission rule, which abolition had been recommended by the board of directors. There were 48 votes cast and 32 were necessary to abolition. The vote stood 30 to 18 in favor, so that the rule stands. The two factions will now probably agree on a compromise rule.

The Kansas City Commercial Exchange at a recent meeting considered the question of reviving the old Board of Trade organization, or of incorporating anew. Heretofore the Commercial Exchange association, composed almost exclusively of grain dealers, has been closely bound to the Exchange Building association, the two organizations having by constitutional provision the same president and secretary. The Exchange building is soon to be relinquished to its bondholders, and the grain men propose to cut loose from the building association. The members of the board had absolute confidence in President Allen and the change was not brought about on his account. The Board merely wished to be independent in case President Allen should retire and someone elected in his place who might not be as agreeable to the Board as he.

The directors of the Chicago Board of Trade have applied to their attorney for an opinion on the recently adopted rule requiring commission merchants to furnish the names of the parties with whom they make trades to parties for whose account such transactions may be made. In his opinion the new rule does not conflict with rules and regulations now in force on the Chicago Board of Trade. In view of this decision the directors advise the members of the Board of Trade to have the following incorporated on all notifications of purchases or sales for customers: "All purchases and sales made by us for you are made in accordance with and subject to the rules, regulations and customs of the Board of Trade of the City of Chicago, and the rules, regulations and requirements of its board of directors, and all amendments that may be made thereto."

The appeal committee of the Chicago Board of Trade has decided the case of A. O. Mason against W. C. Erwin & Co. by reversing the award of the arbitration committee and adjudging costs against Mason. Inasmuch as this decision seems to conflict with most previous rulings and is causing much adverse comment, the details may be of interest. During the late strike Mason sold Erwin a car of oats arriving over the Chicago & Northwestern railroad to go f. o. b. the Baltimore & Ohio railroad, and ordered the car in the usual course of business to the Baltimore & Ohio. The latter road, it appears, had a temporary arrangement with the Chicago & Northwestern to take grain at an outside junction point via the Outer Belt, and

delivery was made in this manner, and as the blind or temporary direction given the seller was "Baltimore," and the car received at junction billed to "Erwin, Baltimore," it was forwarded to that point, which was not the destination intended by Erwin, he having given the Chicago office of the Baltimore & Ohio the correct billing, which was to take place of blind billing where they should receive the car from the Northwestern. This billing, it would seem reasonable to expect, should have been furnished by the Chicago Baltimore & Ohio office to the junction office, in view of the fact that delivery was liable to be made either at Chicago or via the Belt line, but the precaution was omitted, and the car in consequence landed in Baltimore instead of the inland station intended. The decision by the appeal committee apparently throws the onus of blame for the omission of the Baltimore & Ohio on the shoulders of the receiver, Mason, while previous rulings would decide against Erwin, on the presumption that the Eastern road is the agent of the buyer.

LATE PATENTS

Issued on November 13, 1894.

GRAIN MEASURING AND REGISTERING APPARATUS.—Cyrenus A. Gibbs, Schenectady, N. Y. No. 529,068. Serial No. 494,601. Filed Dec. 23, 1893.

BAILING PRESS.—Frank L. Robison, assignor of one-half to Alasco C. Robison, Canandaigua, N. Y. No. 529,083. Serial No. 524,928. Filed July 12, 1893. Renewed Oct. 4, 1894.

CONVEYOR.—James Bulger, Chicago, Ill. No. 529,159. Serial No. 496,603. Filed Jan. 12, 1894.

GRAIN WEIGHER.—Elmer C. Young, Washington, Iowa. No. 529,229. Serial No. 489,647. Filed Oct. 31, 1893.

AUTOMATIC GRAIN SCALE.—Chas. H. Cooley, Hartford, Conn., assignor to the Pratt & Whitney Co., same place. No. 529,246. Serial No. 492,444. Filed Dec. 1, 1893.

Issued on November 20, 1894.

GAS MOTOR.—Maurice Lorois, Nantes, France, assignor to the Societe Anonyme des Moteurs Thermiques Gardie, same place. No. 529,452. Serial No. 471,754. Filed April 25, 1893. Patented in France July 30, 1892. No. 223,360; in Spain Sept. 7, 1892. No. 13,850; in India Sept. 9, 1892. No. 257; in England Sept. 13, 1892. No. 16,413; in Belgium Sept. 26, 1892. No. 101,511; in Switzerland Sept. 26, 1892. No. 5,877; in Luxembourg Sept. 27, 1892. No. 1,696; in Italy Sept. 27, 1892, XXVIII, 32,757; in Cape of Good Hope Oct. 11, 1892. No. 268; in Victoria Oct. 21, 1892. No. 10,073, and in New South Wales Oct. 24, 1892. No. 4,066.

HAY PRESS.—Norman B. Wilder, Kansas City, Mo., assignor to the Kansas City Hay Press Company of Missouri. No. 529,540. Serial No. 475,116. Filed May 22, 1893.

CAR TILTING DEVICE.—Ulrich Frantz, Zabize, Germany. No. 529,549. Serial No. 473,306. Filed May 6, 1893. Patented in England August 31, 1892. No. 15,625.

CAR ELEVATOR AND DUMPER.—Louis E. Hoy and Harman Hoy, Silver Creek, Neb. No. 529,618. Serial No. 501,546. Filed Feb. 26, 1894.

Issued on November 27, 1894.

MALTING MACHINE.—Adam Schultz, Cincinnati, Ohio, assignor of one-half to John Deck, same place. No. 529,842. Serial No. 482,599. Filed August 7, 1893.

GRAIN SEPARATOR.—Clarence D. Hoselton, Drayton, N. D. No. 529,911. Serial No. 515,276. Filed June 21, 1894.

BALING PRESS.—Hamilton E. Smith, Philadelphia, Pa., assignor to the Bessonette Cotton Compress Manufacturing Company, Waco, Texas. No. 529,969. Serial No. 528,004. Filed Nov. 6, 1894.

ELEVATOR CUP.—Wm. F. Boswell, Joplin, Mo. No. 529,698. Serial No. 518,969. Filed July 30, 1894.

DUST BIN, DUST CART, ETC.—Frederick S. Salberg, London, England. No. 530,057. Serial No. 520,298. Filed August 14, 1894.

Issue 1 on December 4, 1894.

GAS ENGINE.—Thomas H. Paul and John T. H. Paul, Frostburg, Md. No. 530,237. Serial No. 493,457. Filed Dec. 12, 1893.

GRAIN ELEVATOR.—Arthur J. Hendricks and Seneca Forsythe, Sterling Valley, N. Y. No. 530,267. Serial No. 511,698. Filed May 18, 1894.

GRAIN SEPARATOR.—Peter R. Lanier, Jackson Hill, N. C. No. 530,280. Serial No. 514,674. Filed June 15, 1894.

CROP : CONDITIONS.

TEXAS, GALVESTON, GALVESTON Co., December 3.—The condition of the grain trade in Texas is very poor and cannot improve until the farmers return to wheat culture and abandon that of cotton. E. B. KRONE.

ILLINOIS, PANA, CHRISTIAN Co., November 29.—A general downpour of rain has visited this section. It is the first rain of any consequence in two months, and will materially aid the wheat and other winter crops.

WEST VIRGINIA, WHEELING, OHIO Co., November 29.—Wheat in this county is in excellent condition. It is covering the ground, and has a bright, healthy, green color. It goes into the winter in first-class shape, and there is every prospect for a good crop next season. A. L. T.

GROWING WHEAT.—Considerable rain has fallen in the West the past week, affording needful relief to the growing wheat crop, and putting it in a more assuring position. In many districts the plant is backward in growth, but not necessarily discouraging on this account.—*Price Current*.

KANSAS, TOPEKA, November 27.—Three-fourths of the wheat crop sown in the western third of Kansas this fall is ruined by the continued drouth. In the latter part of September light rains fell, which caused the grains to sprout, but in thousands of fields the plant is dead. In the central belt the ground is very dry, and the plant will die if rains do not come soon. Parties from that section say that farmers are greatly discouraged by the continued drouth.

INDIANA.—The value of Indiana's crop for 1894 is, according to the state's report, as follows: Total value of the wheat crop is \$25,396,310; corn, \$38,082,053; oats, \$11,470,806; barley, \$153,080; rye, \$630,870; buckwheat, \$136,704; flaxseed, \$136,940; clover hay, \$8,362,765; timothy hay, \$11,511,563; Irish potatoes, \$3,539,805; sweet potatoes, \$106,513; tobacco, \$536,121. The average yield an acre of wheat this year was 19.56 bushels, an increase of about five bushels over the yield of the previous year.

E. M. Thoman's monthly crop report, as published in the Cincinnati *Price Current* December 6, states that the winter wheat area is increased 1.9 per cent. over last year. The area is 24,884,339 acres, against 24,438,940. The condition of the plant is good, being 94.7, against 91.5 last year and 87.4 in 1892. This condition forecasts a harvest of 390,000,000 bushels. Drouth has affected the plant in Texas, Tennessee, Kentucky, Kansas and Nebraska, but with rain soon all drawbacks would be overcome. Over the balance of the area the condition ranges from good to excellent. Area of winter rye has been increased by 4 per cent; the condition is 95.8, against 94.6 last December.

IOWA.—The Iowa crop and weather service issued its last report for 1894 December 10, containing final figures of crops: Average yield of corn was 12 bushels an acre, which is little more than one-third of an average yield. This makes the total yield of the state a little less than 80,867,640. The oat crop leads in number of bushels, being 96,713,256. The general summary of the so-called soil crops, excluding the products of orchards, vineyards and gardens, places their value at \$121,000,000, against \$200,000,000 last year, or a loss through the drouth of last season of about \$80,000,000. Yield of winter wheat was 3,481,312; spring wheat, 7,239,905; rye, 1,554,000; barley, 9,218,970; flax, 1,731,488; potatoes, 4,709,804; hay, tame, 1,875,000; prairie, 1,350,000.

KANSAS.—The report of the Kansas Board of Agriculture for November give the following quantities of grain raised in that state this year: Winter wheat, 28,175,656 bushels; spring wheat, 30,044 bushels; corn, 66,952,833 bushels; oats, 18,385,469 bushels; rye, 978,658 bushels; barley, 582,393 bushels; buckwheat, 10,680 bushels; Irish potatoes, 4,995,181 bushels; sweet potatoes, 326,974 bushels; castor beans, 40,338 bushels; flax, 1,043,418 bushels; broom corn, 15,967,655 pounds; Milo maize, 110,070 bushels; Kaffir corn, 1,258,912 bushels; Jerusalem corn, 268,337 bushels; timothy hay, 536,134 tons; clover, 66,474 tons; blue grass, 129,485 tons; alfalfa, 90,825 tons. The total acreage of all crops was 19,666,283, and the total valuation of all crops was placed at \$61,154,139.26.

MICHIGAN.—The Michigan crop report for December says: Wheat has not made large growth this fall, still it goes into the winter in very good condition. Correspondents' estimates indicate that, compared with vitality and growth of average years, the average condition in the southern counties is 88 per cent.; central, 92; northern, 96, and state, 90. The figures for the southern and central counties and the state are higher, and for the northern counties the same as Dec. 1, 1893. Correspondents this month have made a second estimate of the proportion of the wheat crop that is being fed to stock, the first estimate having been made in October. The average of present estimates is, for the state, 24 per cent. The total number of bushels of wheat reported marketed in November is 1,110,649. The number of bushels re-

ported marketed in the four months, August to November, is 4,740,367, which is 1,618,004 bushels fewer than reported marketed in the same months last year.

WINTER WHEAT.—The government crop report for December shows the condition of winter wheat December 1 averaged 89, against 91.5 in the year 1893 and 87.4 in the year 1892. In the principal winter wheat states the percentages are as follows: Ohio, 93; Michigan, 92; Indiana, 88; Illinois, 91; Missouri, 92; Kansas, 73; Nebraska, 76; California, 92. The returns of correspondents of the department make the acreage of winter wheat sown last fall 103 per cent. of the final estimate of the area harvested in 1894, which was 23,518,796 acres, a figure larger than the preliminary estimate given out in June last, which, upon further investigation, was found to be too low. This preliminary estimate, therefore, makes the area sown for the harvest of 1895 24,224,000 acres.

WINTER WHEAT AND CORN.—The December crop report of the *Prairie Farmer*, recently issued, will say that further investigation confirms the estimate made last month of 5 per cent. increase in winter wheat compared with the area harvested this year. The condition of the growing crop averages 91.2 or about two points lower than a year ago. The crop was planted under unfavorable conditions, a large part of the area suffered from severe drouth during October and November, and the plant is small, not well rooted, stooling poorly and thin on the ground. If hard freezing weather is deferred and there are good rains, the deficiencies noted may be corrected. But the general stamina of the plant is less satisfactory than a year ago. A special report on quality of corn indicates about 77 per cent. of the crop merchantable, or in round numbers 1,100,000,000 bushels, the smallest since 1883.

CORN IN ILLINOIS.—The state report, issued December 11, shows the area of the crop planted to be 6,705,476 acres, the greatest since 1889, and exceeds the 1893 area by nearly 300,000 acres. Of this area 3,009,000 acres were in Southern Illinois. 2,709,576 acres in Central Illinois and 986,900 acres in the southern division of the state. The average yield per acre of 31 bushels is larger than in 1892 and 1893. In the northern division of the state 31 bushels per acre was the average yield, and in the central division 35 bushels, while in Southern Illinois only 18 bushels per acre was harvested. The total yield of 205,637,000 bushels for 1894 is 37,949,000 bushels larger than the yield of 1893. The increased yield in Northern Illinois in 1894 amounted to 17,638,000 bushels, and in Central Illinois to 22,900,000 bushels, but in the southern division of the state there was a decrease of 2,589,000 bushels, compared with last year.

HAY.—The preliminary returns of hay make the average yield per acre for 1894 1.15 tons per acre, says the report of the Agricultural Bureau. This is not as high as the yield of 1893, which was reported as 1.32 tons per acre. The quality is high, as shown by the percentage of 94.5. Iowa, Missouri, Kansas, Nebraska and South Dakota depart further from their ten-year averages than any of the other states, owing, doubtless, to the severity of the drouth. Other states very generally report that the crop was secured in fine condition, having been made before the drouth had done much injury, while the dry, sunny weather furnished every opportunity for proper curing and storing. It should be noted that the large yields reported from the mountain and Pacific states are due to the culture of alfalfa in those states, which, generally under irrigation, yields more heavily than the cultivated grasses of other sections.

ONTARIO CROP REPORT.—The Bureau of Industries reports the following estimate of crops for the year: Fall wheat, 16,512,106 bushels, as against 17,545,248 last year; spring wheat, 3,367,854, as against 4,186,063; barley, 10,980,404, against 9,806,088; oats, 69,867,716, against 58,584,529; peas, 14,022,888, against 14,168,955; buckwheat, 2,534,335, against 2,380,456; corn, 16,275,352, against 14,072,961; and hay, 3,575,200 tons, against 4,963,557 tons. Never before have the reports been so numerous or so emphatic as to the hardness of the times. The general complaint is as to the lowness of prices. Many are of the opinion that the farmers of Ontario must look for their income to cheese, butter, pork, poultry, eggs and fruit. The yield of potatoes will be considerably below the average, chiefly owing to the drouth, although many correspondents in the counties east of Peel and along the St. Lawrence speak of a good return.

AVERAGE FARM PRICES.—The returns to the statistical division of the Department of Agriculture for the month of December relate principally to the average farm prices of the various agricultural products on the first day of the month. By farm prices is meant the price of products of the farm at the nearest local or railway market. In comparisons of these prices with commercial quotations allowance must be made for cost of handling, transportation, profits of dealers, etc. The farm prices of corn average 45.6 cents per bushel, which is 9.1 cents higher than the corresponding price of last year, which was 36.5 cents per bushel. This price is 6.3 cents per bushel higher than the average price for the decade of 1880 to 1889, and is just 4 cents higher than the average for the four years 1890 to 1893. The average price of wheat is 49.8 cents a bushel, the lowest price in the

past twenty-five years. This price is 33.9 cents less than the average for the ten years 1880 to 1889, and is 22.1 cents less than the average for the four years 1890 to 1893. The returns make the general price per bushel of rye 50.5 cents, which is 13 cents lower than the price at the same date last year. The average price of oats, as returned for December 1 this year, is 4.1 cents higher than for the corresponding date last year, being 32.9 cents per bushel, against 28.8 cents December 1, 1893. The average farm price of barley is 44.3 cents per bushel, against 40.6 cents for the year 1893, or a gain of 3.7 cents. The price for 1892 was 47.2. The average price of buckwheat is 56.2 cents per bushel, against 59 cents for the year 1893, or a decline of 2.9 cents. The returns show the average price of hay to be \$8.35 per ton, while that of last year on the farms was \$9.18.

FUTURE OF ENGLISH WHEAT-GROWING.

Some time ago a gentleman of Exwick, England, published a pamphlet on "The Future of English Wheat-Growing," after carrying on an extensive correspondence with parties in America. Yet it did not tell as much about the future or the present condition of English wheat-growing as the following letter from a British farmer, which recently appeared in *Bell's Farmer's Journal*:

"SIR—The thin red line that has faced the fire of a cowardly English public has given way at last, for the very ground on which we stand has been undermined, and the merciless dynamite, in the shape of 18s. per quarter for wheat, has worked its deadly work.

"Our homes are wrecked, and our comrades bleeding and dying in all directions.

"Oh, the long, weary years we have been fighting this battle against a cruel, relentless and unfair foe, who knows full well the price it offers us now we cannot accept and live!

"When we were selling wheat at 32s. per quarter, it was working for nothing; but reductions in our rents and strict economy, 'and no fun or pleasure,' kept the home going.

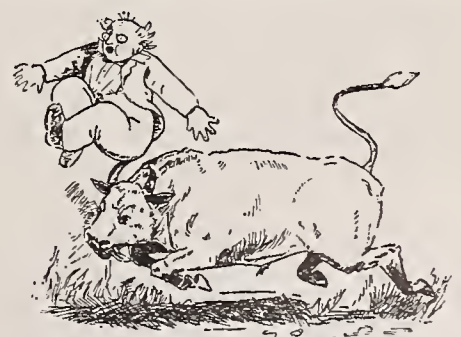
"They say they can do without us, and that the English farmer can be dispensed with, that we are a thorn in their side.

"I say, do without us—try it for one year; let them be solely and wholly dependent on the foreigner, not only for the food supply, but for the payment of poor rates, road rates, school rates and sanitary rates, and many other rates the land is burdened with. We are pursued and hunted down in a way that would be a credit to a race of savages. Are we to receive no quarter? Is it all to be lost that we have placed in the land, and are we all to leave our farms broken down, and, in most cases, broken-hearted men? Strike, brother farmers! Turn face to face with your foe! Unite, land-owners, tithe-owners, with us, back us up! Form a land league, defy the public, do not supply them. Deperate diseases require desperate remedies. I'd sooner die fighting than die in a ditch, and I'd sooner see farmers' blood flow (and other people's too) than the tears of a ruined man.

"Strike, boys, strike, for your hearths and homes! and although our foes are strong, don't forget the biggest bullies are the biggest cowards. Form a ring and fight it out. Appeal to your brother wheat-growers across the seas, who like the prices no better than you do yourselves. Ask him to stop the output for a while and see fair play. Remember Trafalgar Day, eighty-nine years ago yesterday, when our dear Nelson fought and bled, and died. Remember your first fight at school with the big bully. How astonished he was when you turned, and when the fight was over, don't forget the fact that he never bullied you again."

M. Teweles & Co., commission merchants at Sturgeon Bay, Wis., intend to introduce California barley in that section the coming season, as it is very superior to the article at present raised there.

The knot into which the affairs of the Seattle Terminal Railway and Elevator Company have been tangled for the last couple of years has at last been unraveled, and the company's elevator at Seattle is doing business again. This is expected to give an impetus to wheat shipping from that port.



THE BUCKET SHOP MAN HAVING A BULLY TIME.

ITEMS FROM ABROAD

The Buenos Ayres Chamber of Commerce has petitioned the railway companies for a uniform tariff for wheat and maize.

The imports of baled hay at London, England, the past four months are reported to be less than half what they were last year.

During the month of October France imported 286,000 quarters (of 480 pounds each) of wheat and 9,000 sacks of flour, exporting in the same time 7,000 sacks of flour and no wheat.

Notwithstanding the announcement early in the season that France would not need any foreign wheat this year, that country imported 28,480,000 bushels in the first thirteen weeks of the crop year.

From September 1 to November 17 the United Kingdom imported wheat to the amount of 4,661,490 quarters (of 480 pounds each), against 4,827,004 quarters during the same time in 1893-94, including flour as wheat.

The Bristol district, in England, imports annually about 20,000 tons of Egyptian cottonseed. The seed is received unmixed with fragments of cotton fiber, and is said to be much easier to handle than the American seed.

Sweden imported in October wheat and flour equal to 89,000 quarters of 480 pounds each of wheat; and in the three months ending October 31 the total import of the two was 297,000 quarters, against 248,000 quarters in the same time in 1893.

Reports from Spain, Italy and Hungary point to favorable crops. In Algeria the prospects are poor owing to drouth, and in Roumania also conditions are unfavorable. Algeria exports considerable wheat to France, where it enters free of duty.

Reports from Berlin say that the yield of rye is less than last year, while the yield of wheat is better but poor in quality. In Western Germany excessive rains have interfered with fall sowings of rye and wheat, but these conditions have not prevailed in Eastern Germany.

Consul General J. M. Crawford writes from St. Petersburg that after a thorough investigation he finds it impossible to make a definite estimate of what the wheat area in Southern Russia will be during the next two or three years, but that it is extremely doubtful if there will be any increase.

The wheat deliveries in England are so small that it is thought that either the crop is small or poor or an unusual quantity is being used for feed. There is plenty of evidence for the latter. Even in Scandinavia the practice is growing, and some British journals are prognosticating a revolution in the accepted notions of the annual consumption.

According to the estimates of the Russian agricultural ministry the grain crop is as follows: Wheat, 272,000,000 bushels, against 336,000,000 last year; rye, 792,000,000, against 752,000,000; barley, 176,000,000, against 224,000,000; oats, 664,000,000, against 672,000,000; maize, less than half of last year's crop. This, however, is only an approximate estimate.

Holland imported in October 656,000 quarters (of 480 pounds each) of wheat and 102,000 sacks of flour. The exports were 440,000 quarters wheat and 16,000 sacks flour. During the first three months of the current season the net import of the two articles equaled 712,000 quarters compared with 593,000 quarters in the corresponding three months last season.

According to the estimate of the ministry of agriculture the wheat crop in 50 provinces of European Russia amounts to 34,100,000 quarters of 480 pounds each, against 41,900,000 in 1893, 30,900,000 in 1892 and 22,000,000 in 1891. This shows a material decrease compared with the crop of 1893, but it is only an approximate estimate, while statistics of former years are reliable.

Reports from Argentina vary considerably. Locusts have appeared in Santa Fe, Cordoba and Rosario, and opportune rains have been followed by disastrous hailstorms. Official reports from the River Plate estimate the available wheat for export at 200,000 tons. The new crop is estimated to yield 74,000,000 bushels. The wheat crop in the Province of Santa Fe is expected to be about equal to the last, while an increase of 30 per cent. is expected in the linseed crop.

During August and September Belgium imported 1,253,000 quarters (of 480 pounds each) of wheat, against 917,000 quarters in the same time in 1893, 27,500 against 20,000 quarters of rye, 232,000 against 232,000 quarters of barley, 1,224,000 against 1,209,000 hundredweights of other cereals and 98,000 against 91,000 sacks of flour. Exports for the same time were 243,000 against 316,000 quarters wheat, 13,000 against

33,000 quarters rye, 27,500 against 86,000 quarters barley, 300,000 against 471,000 hundredweights of other cereals and 30,500 against 23,000 sacks of flour.

From August 1 to November 10 Russia exported 5,156,000 quarters of wheat, 1,963,000 quarters of rye (both of 480 pounds each), 4,348,000 quarters (of 400 pounds each) of barley, 2,982,000 quarters (of 304 pounds each) of oats and 1,013,000 quarters (of 480 pounds each) of maize; against 4,064,000 quarters wheat, 929,000 quarters rye, 4,276,000 quarters barley, 2,806,000 quarters oats and 204,000 quarters maize in the same time in 1893.

Fires, Casualties, Etc.

Turner & Brennen, grain dealers at Wayne, Neb., sustained a loss by fire recently.

Simon Hieronimus' brewery at North Bloomfield, Cal., was recently destroyed by fire at a loss of \$6,000.

Albert Schuhs recently fell and broke his leg while unloading grain at Paiue Bros' elevator at Milwaukee.

J. A. Uerling's brewery at Klamath Falls, Oregon, was burned November 13. Loss \$5,500; insurance \$2,500.

The Keeley Brewing Company's warehouse at Roby, Ind., was destroyed by fire November 24, at a loss of \$2,000.

The Genesee, Ill., Brewing Company's plant was destroyed by fire December 10. Loss \$50,000; insurance \$20,000.

W. O. Van Horn's granary at Davenport, Wash., was recently burned. The loss was partly covered by an insurance of \$600.

The Michel Brewing Company's warehouse at La Crosse, Wis., was destroyed by fire December 8. Loss \$15,000; fully insured.

T. C. Leaman, grain and flour dealer at Lancaster, Pa., shot himself in the arm recently while removing cartridges from a revolver.

The Sun Elevator at Kansas City, Mo., which is operated by the Crescent Grain Company, sustained a slight damage from fire December 8.

A fire on the Chance plantation, near Bryan, Texas, December 5, burned 3,000 bushels of corn, which was a total loss, as there was no insurance.

Murphy & Snyder's elevator at Effingham, Kan., was burned December 4 with a considerable amount of grain. The elevator was valued at \$3,000.

H. C. Jeffries' elevator at Dunbar, Neb., was destroyed by fire recently, together with 1,500 bushels of wheat. The loss is partly covered by insurance.

John Moore of the Fond du Lac, Wis., Malt and Grain Company, fell from the roof of his house recently and sustained serious injuries. His recovery is doubtful.

W. M. Smith's grain elevator at Portage la Prairie, Man., was burned November 10, together with 8,000 bushels of oats and 5,000 bushels of wheat. Loss \$15,000; insurance \$5,000.

S. C. Morrison's large hay barn at Bayle City, Ill., was recently destroyed by fire, together with 700 tons of hay. The loss is estimated at \$5,000, which is partly covered by insurance.

Cornelius & Menefee's cotton gin at Whitney, Texas, was destroyed by fire November 17, together with considerable seed cotton and about three tons of seed. Loss \$2,500; insurance \$1,500.

A granary on Senator Haggart's farm at Fargo, N. D., burned recently, together with 6,000 bushels of oats, 500 bushels of corn and considerable machinery. Loss \$6,000; insurance \$3,000.

W. H. Howard & Co.'s elevator at Conrad, Iowa, together with nine corn cribs and 3,000 bushels of grain, burned on the night of November 25. The loss was partially covered by insurance.

E. W. Heck of Mobley Pond, Ga., lost his stables and barns by fire November 17. Twelve thousand bushels of corn, 15,000 pounds of fodder and 20,000 pounds of pea hay were also consumed.

Fire originating in the engine room of Kline Bros' elevator at Rockwell, Iowa, November 23, destroyed the building and contents, 40,000 bushels oats and a large amount of flour and feed. Loss \$25,000; insurance \$5,500.

The Chicago & Grand Trunk Railway elevator and warehouse at Valparaiso, Ind., burned on the night of December 11. It was set on fire by freight car thieves. The elevator contained about 5,500 bushels of wheat, 1,500 bushels of oats, and hay and straw. Postmaster Brodie, lessee of the elevator, estimates his loss at

\$3,300, the railroad loss being \$2,000, both covered by insurance. A good search will be made for the criminals.

The elevator and hay barns of P. L. Dodge at Rosamond, Ill., were destroyed by fire November 25, together with 1,000 tons of hay and 2,500 bushels and four carloads of grain. The loss will amount to \$15,000, the insurance \$10,000.

G. C. Hurlbutt & Co.'s elevator at Beaman, Iowa, was destroyed by fire November 25, together with a number of corn cribs. There were only 200 bushels of grain stored, and the loss on the elevator and contents is fully covered by insurance.

The grain and hay warehouse of the Russell Grain Company at Kansas City, Mo., was destroyed by fire December 6, at an estimated loss of \$2,500, which is covered by insurance. The fire is supposed to have been caused by a spark from a locomotive.

F. A. Dessert's elevator at Macon, Mo., was destroyed by fire November 22, together with 12,000 bushels of corn and oats. Loss \$10,000; insurance \$3,400. The elevator had not been operated since last May, and the origin of the fire is unknown unless it came from a small fire in a stove.

Oscar Hutchinson, called the "Old Hutch" of Rutland, Ill., committed suicide Thanksgiving Day by shooting and hanging himself. This "Old Hutch" is said to have been a relative of Chicago's whilom speculator of the same name. He speculated in grain at Chicago and was one time wealthy.

On the night of December 3 burglars broke into Gilchrist & Co.'s elevator at Lime Springs, Iowa, and stole \$200 worth of timothy seed. Grain thieves seem to be thriving in that locality, for this is the third steal in ten days. Hunting & Co. lost \$170 and the Farmers' Elevator Company \$150 in the same way.

C. S. Hill, the well-known grain dealer of Freeport, Ill., met with an unfortunate and serious accident November 26. The horse which he was driving ran away and Mr. Hill's legs were broken two ribs fractured and a wound inflicted on the head. As he is at an advanced age his friends find very slight hope for recovery.

John Renow, an employe of the Tileston Milling Company, was recently killed while loading wheat from the elevator into a car at Eagle Bend, Minn. He had partly loaded the car at one bin and was moving it down to the next chute with a pinch bar. It was down grade and the car knocked the man down and killed him.

The large frame warehouse at Mt. Holly Springs, Pa., owned by Philip Harmon and containing a large quantity of grain and flour was destroyed by fire on the night of November 26. Loss \$7,000; insured. It is thought that the fire caught from an overheated stove in the office. An overheated stove is the extreme degree of inexcusable carelessness.

Early in the morning of November 17 the St. Anthony and Dakota Elevator at Beltrami, Minn., was destroyed by a fire supposed to have caught from a hot stove in the office. There was no fire extinguishing apparatus, and the building was totally destroyed, though part of the 30,000 bushels of wheat it contained was saved. The loss, \$25,000, was partly covered by insurance. It will be rebuilt at once.

MICHIGAN FARMERS WANT STATE INSPECTION OF GRAIN.

At a recent meeting of the Fraternity Grange at Willis, Mich., the associate editor of the *Michigan Farmer* addressed the meeting on the necessity of a public grain inspection law. He aimed to set before those present the irresponsible system now in vogue, how it is manipulated by buyers and dealers to the financial loss of grain growers and the injuring of the grain crops of the state. By purchasing at a lower grade than the grain really tested, by subsequent mixing, by the manipulation of the test cups so as to make them an aid in deceiving the farmer, the dealer generally succeeded in getting his grain two or three cents per bushel under market values. The miller followed the dealer, and by use of a "cleaner" attached to his mill, secured his stock at the price the uncleaned grain would call for, cleaned out everything that would not make flour, and only paid for the amount of clean wheat, although the price agreed upon represented the condition of the wheat. The miller thus got a No. 1 wheat for a No. 2 price, and the farmer was flim-flammed out of three to four cents per bushel on his crop. The only remedy was a system of public inspection by bonded officials, as was done in Illinois, Minnesota, Missouri and other states.

A furniture firm at Spokane, Wash., which uses a great deal of flax straw for stuffing had formerly bought it at Chicago for \$12 per ton. This year the straw was bought in Idaho and \$20 per ton paid for it. The firm said that if the whole Palouse country raised flax it would all be sold at home at high prices.

VALUABLE BOOKS FOR GRAIN DEALERS.

The following standard works will be sent, postage paid, on receipt of prices given:

ROBINSON'S TELEGRAPH CIPHER.—The publishers have recently revised this excellent work, and we are now prepared to supply the trade. Cloth binding, \$1.50; leather.....\$2.00

WEIGH BOOKS.—Containing 125 perforated leaves with four weigh tickets and four stubs to each leaf, well printed upon good paper. The books are well bound. Copies will be mailed to any address for \$1.00

CLARK'S VEST-POCKET GRAIN TABLES.—A very useful and handy little book for grain buyers; to be used in reducing to bushels any quantity of grain or seeds up to 100,000 pounds. Size 2½ by 8½ inches, 16 pages. Leatherette.....\$2.50

POUNDS TO BUSHELS.—These tables which show the number of bushels in any quantity from 20,000 to 70,000 pounds were compiled for the Chicago Grain Inspection Department. They are well printed on good paper and conveniently arranged for quickly finding the number of bushels in a carload. Each book contains ten leaves and each leaf is indexed at margin and printed on one side only. Each book is neatly bound in cloth. They will save clerks much labor and prevent errors in reduction. Price for "OATS," \$1.00; "BARLEY," \$1.00; "CORN AND RYE," \$1.00. The set.....\$2.50

JENNINGS' TELEGRAPH CIPHER AND DIRECTORY TO NEW ENGLAND TRADE.—A new guide to carload buyers of grain throughout New England. A list of those engaged in the grain, feed and flour trade. Western grain shippers and millers wishing to do business in this territory will find this directory invaluable. The telegraph cipher has met with favor and is highly recommended by users. In fact the code part of the book is considered by many shippers superior to any other in use. It is modern and practical, a great money saver and will prevent mistakes. Nicely bound in leather.....\$3.00

ADAMS' CABLE CODEX.—This code is compiled especially for sending cablegrams and is used extensively in this country and abroad. The seventh edition, which is about to go to press, will contain 160 pages of cipher words, conveniently arranged. The code contains sentences covering and referring to buying and selling, condition of market, sterling money, United States money, business, financial matters, letters of credit, drafts, standing of firms and many sentences used by travelers. The cost of the code is a mere nothing compared with the saving which can be made on one message. Price, postpaid.....\$0.55

DAVIS' GRAIN TABLES.—These tables give the value of any number of bushels of produce weighing 60 pounds to the bushel from 25 cents to \$1.25 per bushel, and the value of any produce weighing 32, 48 and 56 pounds to the bushel at 15 cents to \$1.50. The book also contains Davis' Dockage Table, which gives the amount to dock any load of wheat up to 600 bushels at 1½ to 5 pounds' dockage. The book contains 219 pages of tables, printed on good paper, with large type, and well bound in cloth. The book is a new publication, and the arrangement of the tables is much more convenient than in some of the old publications. Price.....\$1.25

CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains 16 tables, and is neatly bound in cloth. Price.....\$1.50

ROPPE'S COMMERCIAL CALCULATOR.—A small manual in compact form which contains a new system of useful and convenient commercial tables. Also a "Practical Arithmetic for Practical Purposes" in which is embodied the shortest and simplest rules and methods known. It includes in its contents a table giving the value of cattle, hogs, flour, etc., for any amount ranging from 3 to 20,000 pounds, and in price from \$2.50 to \$6.75 per 100 pounds. It contains a table which shows the equivalent of English market quotations from 1 to 100 shillings in U. S. money. It also shows the freight on grain per bushel from 1 to 50 cents per 100 pounds. The grain tables show the number of bushels and odd pounds in any quantity of any kind of grain from 10 pounds to 100,000 pounds. The hay, straw and coal tables shows the value in tons of any amount ranging from 10 to 3,000 pounds at prices from 25 cents to \$18 per ton. The interest tables are very complete and give the interest for any amount for any time and for any rate per cent. ranging from 6 per cent. to 10. The millers' and farmers' exchange table gives the number of pounds of flour to be received from wheat ranging from 5 to 3,000 pounds and from

25 to 40 pounds to the bushel. Tables of money weights and measures are also included, and also the metric system. The book contains much other useful information. Price.....\$0.50

For any of the above, address
MITCHELL BROS. Co., 184 and 186 Dearborn street, Chicago, Ill.

Latest Decisions.

Validity of Future Contracts.

United States Judge Blodgett recently decided a case where an agent of Noah P. Harrison at Chicago had been sued for losses on futures which he had ordered for himself. The judge held that such contracts were not gambling contracts, and their validity had been repeatedly passed upon. As to the question of agency the defendant had personally bound himself to make good and protect all deals made on his orders, and besides had not disclosed the name of his principal, so that in either case he must be held liable. Judgment was rendered against him for amount claimed and interest, \$1,475.50.

Liability of Carriers for Mixing Grain.

The Ontario Court of Appeals has dismissed with costs the appeal of the Northwest Transportation Company from an order in chancery of the divisional court. It dismissed the motion by the appellant to set aside a judgment by Judge Street in favor of F. B. McKenzie, grain merchant, of Brandon, Man., for \$3,333 and costs, in an action brought against the company for damages for allowing wheat shipped by him to become mixed with other wheat while in transit on the vessels. The company contended that their contract with the plaintiff was not a through contract, and that mixing, if any, was done by others for whose acts they were not responsible. The court held the contract was a through one.

Carrier—Consignment—Merchandise.

The Supreme Court of Minnesota held, in the recent case of Kirk vs. Chicago, St. Paul, Minneapolis & Omaha Railway Company, that in the case of portable boxes or packages of valuable merchandise, the liability of a railway company as common carrier does not terminate until the goods are removed from the cars and placed in their freight room ready for delivery to the consignee, and the consignee has had a reasonable time thereafter to remove them. In the case before the court a valuable box of merchandise was left in the car in which it was transported, and, over 48 hours after the car arrived at the place of consignment, was stolen from the car. It did not appear that there was any special reason for leaving the box in the car, or that there was any custom or agreement to deliver such packages to the consignee directly from the cars. The court held that the defendant's liability as common carrier had not terminated.

Must Settle for Grain Destroyed in Elevator.

A verdict was found for the plaintiff in the United States Circuit Court at Boston, November 27, in the case of F. H. Ruggles and others against the Central Vermont Railroad, a suit to recover for grain destroyed in defendant's elevator in Ogdensburg, N. Y., in September, 1890, by fire. The sum involved in this suit was only \$5,000, but the precedent established carries with it a settlement of five other cases, with damages assessed at \$25,000, and the probability of the settlement of still more cases in New York and Chicago, which, taken with the verdicts in twelve suits tried last week in the state courts, make a total of nearly \$250,000 that the company may be called upon to pay as a result of the fire. The importance of the cases was fully realized by the defendant's attorneys, who have fought the suit stubbornly in both the state and federal courts, but the verdicts have been against them in every instance.

Bill of Lading—Liability.

The Superior Court of Kentucky held, in the recent case of Newport News, etc., Company vs. Nixon, that in an action against a railroad company to recover the value of tobacco which plaintiff had delivered to defendant at its depot for shipment, but which was destroyed by fire before it was shipped, where it appeared that the defendant, under its bill of lading, was not liable unless it was guilty of negligence, and the only negligence complained of was defendant's failure to ship the tobacco before the fire occurred, it being shown that there was but one train upon which tobacco could be shipped between the delivery of plaintiff's tobacco for shipment and the time of the fire, and that this train was loaded with tobacco received for shipment before plaintiff's tobacco was received, it sufficiently appeared that plaintiff's tobacco could not in the regular course of business have been shipped before the fire, and, therefore, defendant was

exonerated from liability, and that inasmuch as plaintiff owned only one-third of the tobacco, the other two-thirds belonging to his son, it was error to render judgment in his favor for the value of the whole, and that this was true whether the ownership was put in issue or not, as the action being one for damages the plaintiff could recover no more than he showed himself to be entitled to.

Cannot Serve Two Masters.

Brokers sometimes prove themselves to be very thrifty persons by pretending to serve, and trying to secretly collect commissions from, both buyer and seller. The law frowns upon this. So the courts have held that one cannot act as agent for both seller and purchaser, unless both knew of and assented to his undertaking such agency and receiving commissions from both, and that a broker acting for both parties in effecting an exchange of property can recover compensation from neither, unless his double employment was known and assented to by both. Besides this, now comes the Supreme Court of Nebraska, and holds (Campbell vs. Baxter) that money paid by a principal to his agent for the latter's services in effecting a sale or exchange of the principal's property may be recovered back, in an action at law, when it appears that such agent had or was to receive a commission or compensation from the other party to the trade or exchange for his services in bringing it about, if it also appears that, at the time such principal made such payment, he was ignorant of the fact that his agent was acting for both parties to such trade or exchange. —Business Law.

Warehouse Receipt—Grain—Delivery.

The Supreme Court of Minnesota held, in the case of the State vs. Rieger, that section 6 of chapter 86 of the Minnesota laws of 1876, providing that no person holding grain in store shall dispose of or deliver it out of the warehouse in which it is stored without the express authority of the owner of the grain and the return of the receipt given therefor, was not repealed by section 415 of the Minnesota Penal Code; that in an indictment under section 6 it was not necessary to allege a tender of the receipt and a demand for the return of the grain, and that where a receipt for grain placed in store, which in all other respects constituted a contract of bailment, contained the following: "The conditions on which this wheat is received at this elevator are that Rieger (the warehouseman) has this option, either to deliver the grade of wheat that this ticket calls for or pay the bearer the market price for the same, less elevator charges, on surrender of this ticket," the stipulation did not render the contract one of sale, but merely gave the warehouseman an option to buy when the receipt was presented, which option he could only exercise when the receipt was presented, and by paying the money.

OBITUARY

A. W. Hatfield, for many years connected with the grain trade at Chicago, died November 28.

E. W. Speck, an old member of the Chicago Board of Trade, died November 29. Mr. Speck was prominently connected with the barley trade.

Harvey Brooks, a well-known grain dealer at Brown's Station, Ohio, died November 18 of lockjaw. He had received a wound on his hand from a small silver watch a few days before.

Robert Campbell, a wealthy grain dealer of Paola, Kan., died at Kansas City November 17. He had submitted to an operation, the shock of which was too much for him. He was 60 years of age.

Captain Eugene D. Robinson of the grain commission firm of Robinson & Jackson of Baltimore died November 11. He was a prominent member of the Baltimore Corn and Flour Exchange. Mr. Robinson served in the Confederate army until the close of the war, when he went to Baltimore and entered the grain business.

Chas. W. Moore, a member of the grain firm of Moore & Maxfield of Minneapolis, died November 30 of diabetes, a disease with which he had been afflicted for a number of years. Mr. Moore went to Minneapolis in 1855. In 1872 he became a member of the firm of Crocker, Fisk & Co., and in 1887 he sold his interests in that company and joined with Mr. Maxfield, with whom he has been identified ever since. He was 55 years old at the time of his death and leaves a wife and two children.

In obedience to a summons of the Missouri State Board of Railroad and Warehouse Commissioners representatives of the Missouri railroads appeared to show cause why rates on grain should not be reduced. At the request of the railroads action was deferred until a future time. No immediate alteration in rates is expected.

WATERWAYS

The vessel Westside, loaded with grain, went ashore near Amherstberg, Ont., badly damaging her cargo.

The government has been called upon to appropriate money for the improvement of the Delaware River.

Fifteen miles of the Illinois Hennepin Canal will be open for navigation next spring. The first water was let in the finished portion November 29.

According to the report of the Bureau of Navigation, during the last decade the total tonnage of the great lakes increased 500,000 tons, almost doubling.

The present status of the Panama Canal enterprise does not point to much progress being made toward anything like completion, and Americans look with much favor on the Nicaragua waterway.

The value of commerce passing the Soo Canal during 1894, without counting the 200,000 tons of the first week in December, is estimated at \$152,363,580.20, an increase of \$6,926,633.36 over that of 1893.

Up to November 1 there were 28,042,536 bushels of grain transported via the Soo Canal, against 39,384,302 bushels in the same time in 1893. The total tonnage has largely increased over that of the season of 1893.

The work of deepening the Erie Canal to a uniform depth of nine feet will be commenced in the spring. Other improvements will be necessitated and the appropriation, \$100,000, will fall far short of being sufficient.

The International Deep Waterways Association will hold its next convention at Cleveland, Ohio. A further discussion of the problem of waterways to connect the great lakes with the Atlantic will be indulged in.

It is said that the aggregate quantity of grain and flour exported from Portland has grown very large, and that the exports for the present season will more than double those of any other port on the Pacific Coast excepting San Francisco.

During the eight months from April to December there were 10,739,059 bushels of wheat shipped from Superior, Wis., against 11,348,366 bushels in 1893; and 3,077,038 barrels of flour, against 2,642,812 in 1893, and 21,868 sacks of bran, against 62,977 sacks in 1893.

Has anyone heard the marine underwriters complaining this year? They do not always have such a fortunate season; but there is \$50,000 that they did not get, and the American Steel Barge Company has saved that much on premiums by carrying no insurance on its vessel hulls.

It is estimated that the cost of deepening the Duluth and Superior harbors and the entrances thereto to a uniform depth of 20 feet will amount to \$3,130,553. The report of the commission appointed to examine said harbors has been sent to the House of Representatives at Washington.

It is hard to believe, even in these days, but the work of surveying various proposed routes for a ship canal from Lake Erie to the Ohio River is actually in progress and will soon be pushed forward on an extensive scale. If it goes no farther than the surveys (and it is probable it will not) much harm will not be done.

The plan of the Buffalo elevators to have all grain cargoes pass through the hands of a special agent, and thus avoid the practice of rebate paying, seems to have failed in its working qualities. But now that navigation is closed, elevator men will have a chance to settle differences by the time of opening next spring.

A Toronto firm has submitted a plan to the Duluth Chamber of Commerce, giving details of a project for shipping grain direct from Duluth to Manchester, England. The claim is made that grain can be shipped direct five days quicker than via Erie Canal and New York and for 1 cent cheaper. The Board of Trade will consider the plan.

The Canadian financial minister states that he has secured loans for the deepening of the Canadian canals. He says: "The greatest draught will be at Sault Ste. Marie. There will be 20 feet; elsewhere the greatest depth will be 14 feet. The canals will be finished about two years from now, and they will largely benefit the greater part of our Canadian industries."

Extensive improvements are contemplated for the Erie Canal. Some reconstruction will be necessary and different methods of maintenance enforced. While such work will be expensive the past record of the Erie Canal will warrant a heavy outlay. It is one of the few successful waterways, and every effort should be made to enable the carrying on of traffic at a minimum expense, as that is the main purpose of

canals. Surveys for the contemplated work are now being made and the legislature will be asked to appropriate \$1,000,000.

A plan has been submitted to the Chamber of Commerce of Duluth for the establishment of a line of boats from Duluth to Owen Sound to connect with the Grand Trunk Railway. It was referred to a special committee.

The Tehuantepec Railroad, which connects points on the Atlantic and Pacific Oceans, is completed. The road is built 130 miles across the isthmus in the Southern part of Mexico and reduces the distance between the oceans about 3,000 miles. Several important cities are along its route. It will doubtless prove of value to American commerce, and especially the Pacific Coast trade.

The close of navigation December 1 gives vessel men an opportunity to look about them. Those who came through the season with a profit will be rare. The majority have come out about even and are glad the unprofitable season is over. Grain has been plentiful, the weather unusually favorable, and only unreasonable competition prevented the transaction of business on a paying basis.

The projected canal between Lakes Michigan and Erie was long ago attempted and abandoned after the expenditure of hundreds of dollars of the people's money. The local benefits of such a canal would be so slight as not to justify the government undertaking it, and it is very dubious whether there would be a saving in navigation. However, it is not the wildest scheme on the tapis, impracticable as it is.

The advocates of the project of the Maryland & Delaware Canal struck a snag in the report of the Baltimore Board of Trade, which says that in view of the enormous expense of construction and the insurmountable difficulties of navigation, even were the waterway completed, the canal would be rendered valueless, and that "such a ship canal would be of no practical use or benefit to the foreign commerce of that port."

It is reported that a movement is well under way looking to the opening of the Canadian waterways to United States vessels. It is estimated that the Dominion's waterways have cost \$60,000,000, more than the government could afford. The tolls and revenue from power privileges have been a mere bagatelle, and it is a fact that Canadian commerce is constantly decreasing. It now costs Canada about \$1,000,000 a year for the maintenance of her waterways.

The scheme to connect the Delaware River and New York harbor by a ship canal grew out of its speculative infancy about fifty years ago, and now it seems likely that work will soon commence on its construction. The commercial advantages of such a waterway are hard to find, but the chief one seems to lie in the hope that Philadelphia will magnanimously stand the expenses of shipping by that route and avoid the natural course she already possesses.

The bill providing for a canal between Duluth and St. Paul has no mention of it being a ship canal, though everyone seems to take it for granted that such is the project. Even the engineers are beginning to look at it as a not altogether dead sure successful scheme. Surveying parties are now out trying to ascertain what water supply could be obtained. As the Mississippi is unnavigable most of the time above Keokuk, this canal would be of little value to anyone but the contractors.

The large shipments of Manitoba wheat to the seaboard via Buffalo instead of Montreal are not a surprise to those who have shipped both ways. An exporting firm not long ago had a cargo of peas shipped to Liverpool by way of Montreal about the same time that they sent a lot by way of New York. The charges, they say, from Montreal to Liverpool were exactly three times the cost of shipping the grain from New York to the same port. The bulk of Manitoba wheat shipments this season have gone by way of Buffalo.

Shipments of Manitoba wheat by way of Port Arthur and Ft. William amounted to 8,400,000 bushels during the season just closed. But the Canadian marine has benefited comparatively little from this large business, as 90 per cent. of it was carried in American bottoms to Buffalo for export via New York and Boston. Hitherto the Canadian export route via Kingston and Montreal has had a fair share of the trade in carrying Manitoba wheat, but this season the Americans have absorbed practically all the business.

On account of very favorable weather lake shippers are inclined to extend the season longer than the insurance companies deem fit. The Chicago Board of Marine Underwriters thinks navigation ought to close with December, ice or no ice, and has fixed the following insurance rates on grain for storage during the winter and the voyage to its destination at the opening of navigation next spring: To ports on Lake Michigan, Lake Huron, Sarnia and Detroit River, 1 per cent.; Georgian Bay and Lake Erie, 1.1; Lake Ontario and Ogdensburg, 1.2; Montreal, 1.3. The general insurance agents decided not to reduce their trip rates on grain down this fall below 1½ per cent. Toledo and Detroit 60 per cent. of the foregoing. The difficulty with trip rates so late in the season is that

the insurance companies which reinsure portions of the risks are averse to taking large lines at this season of the year, and the companies ordinarily engaged in marine insurance are compelled to offer extraordinary inducements in order to obtain reinsurance.

As an explanation as to why Manitoba wheat is exported by way of New York rather than Montreal the *Winnipeg Commercial* says: The people of the old provinces, Montrealers in particular, are puzzled and aggrieved over the fact that Manitoba wheat is being exported via the Erie Canal and New York, instead of via the St. Lawrence and Montreal. The reason, of course, is that the New York route is the cheaper. New York offers better shipping facilities and lower ocean rates than Montreal. As Canadians, we in the west would prefer to see the Canadian route made use of, but the keen competition necessitates the use of the cheapest outlet. Another reason why Manitoba wheat goes via New York is owing to the fact that Winnipeg shippers find it an advantage to trade with the large New York exporters.

The Maritime Nicaraguan Canal Company of New York has made its report to the Secretary of the Interior. The affairs of the Nicaragua Canal Construction Company, an organization within the Maritime Company, is reviewed. This company failed last year. It had the contracts to build portions of the canal and it was owing to its failure that the Maritime Company was unable to do any work. The construction company is now reported to be reorganizing and the report says that it is in a fair way to become substantial. The company expresses the hope that more favorable financial times will see the construction company ready to proceed with the work and progress made in building the canal. An attempt is being made in Vermont to incorporate the Nicaraguan Company, which is designed to take the place of the Nicaraguan Canal Construction Company. The capital stock is placed at \$12,000,000.

In a recent paper published by the American Academy of Political and Social Science Professor E. B. Johnson discusses the problem of "Inland Waterways and Their Relation to Transportation." He specifies three conditions as essential to the successful maintenance of waterways in competition with railroads—sufficient traffic, a canal large enough for vessels of 500 tons, and a construction of banks so that the use of steam tractions would be possible. The writer says that while the policy of railroads have a tendency to suppress canal transportation in competition with them, the traffic of railroads on the other hand is increased by canals making more business. Professor Johnson makes some mistakes, however, such as holding up the Manchester Canal as being amazingly profitable. The waterway problem needs the attention of sound and thoughtful investigators, and the work of Professor Johnson is commendable.

This Exchange recently adopted a resolution protesting against the withdrawal of marine underwriters from taking risks at or near what is commonly called the close of the season. A demand for grain for shipment by lake frequently continues after December 1, and especially of corn. This grain does not mature early enough to supply Eastern consumers by lake shipments before December 1, and this season is not exceptional in this respect. Corn is a low priced grain, and the cheaper the freight cost the greater the movement. This Exchange assumes that on the steamers that are ready and willing to continue their trips in good weather after December 1, even until Christmas, that the insurance risk is no greater than in October. Especially is this true of Toledo, where the trip to Buffalo is eighteen to twenty hours. Underwriters have no right to retire from such a business field at an advance of rates corresponding to the season. It is the best business of the season. Conditions have changed. It is not the old sail vessels that ask for insurance, but a class of staunch seagoing steamers. Underwriters should look beyond the range of their eye-glasses, and broaden out to meet the times.—*Toledo Produce Exchange Report.*

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

- J. A. Jamieson, Montreal, Que.
- C. Howes of S. Howes, Silver Creek, N. Y.
- L. S. Hogeboom, representing The Knickerbocker Co.
- B. F. Ryer, representing Huntley, Cranson & Hammond.
- H. Hamper of Greenville, Mich., representing S. Howes.
- John O. Foering, Chief Grain Inspector, Philadelphia, Pa.

The Illinois Railroad and Warehouse Commission recently decided that the Pittsburg, Ft. Wayne and Chicago Railway overcharged W. H. King & Co. of King's Station on switching rates. The legal rate is \$3 per car for each three miles and the railway charged \$5.

PRESS COMMENT.

EFFECTS OF CORNERS.

All "corners," "rings" and similar combinations must have an unhealthy effect upon all branches of trade, and it is only a question of time when the actual "cornerers" themselves often find themselves in the net which they have laid for others. Unfortunately, however, Nemesis too often does not overtake them until they have wrought untold harm to thousands of traders.—*Foreign and Colonial Importer.*

AGAINST OPTIONS.

Nobody will be surprised at the action of the Knights of Labor in declaring against "gambling in farm products in any way, or options." We know of nobody who in terms advocates gambling in farm products, or, for that matter, in any other kind of products, but it is a different matter if the resolution classes options and futures as gambling contracts. The adhesion of the Knights to the Hatch-Washburn platform will scarcely be regarded as strengthening it.—*Bradstreet's.*

"DISCRETIONARY POOLS."

It is understood that what are known as alleged syndicates for the management of "discretionary pools" in stocks, grain and provisions have been formed in the larger cities of the United States. These alleged syndicates claim to pay a certain percentage of profit every month, owing, of course, to the judicious management of the concern. Investors should remember that no business can pay these alleged monthly dividends. If it could, the managers would be foolish to give others a chance in this profitable business.—*Daily Bulletin.*

UNIFORM SYSTEM OF GRADING.

Why this system has not been established long before this is an enigma to the writer; it is certainly one of the important reforms that could be inaugurated for the betterment of the trade, and would, without a doubt, be one influence that would bring about a more satisfactory and pleasing way of handling this commodity, would do away with a great many of the bickerings and unpleasantness accruing therefrom; would bring the trade to a better understanding at both ends of the road, and a fuller realization of its practicability.—*Hay Trade Journal.*

VISIONARY CANAL SCHEMES.

The energy of the nation can be better spent in improving the present natural waterways than in digging artificial canals up hill and down hills and between different levels. The cost of a four-track air line railroad between the Twin Cities and the head of the lakes would be so much less than the cost of a canal that the saving in interest charges would more than wipe out the excess in cost of operation. Besides the railroad would have the advantage of rapid time. These visionary canal schemes have the effect of making the railroads realize that there is a limit to their rights to tax the business of the community in which they are operated.—*Telegram, Superior, Wis.*

JUSTICE IS INTENDED FOR BOTH.

Although a statute might be primarily enacted to protect one party, it cannot be made to promote injustice to another party. It is well understood that the prohibition against the charge of unreasonable rates was originally intended as a means of protecting shippers from the exaction by carriers of unreasonably high rates; but under a proper construction that is no bar to its employment for the prevention of unreasonably low rates. So also with the act to regulate commerce. It is still by many, and has been even by some of those charged with its administration, held to have been enacted to protect "the people against the railroads," but if it is to regulate commerce within the equitable meaning of such a term, it must do justice to both.—*Railway Review.*

FUTURES IN LONDON.

The system of dealing in futures has become a necessity of modern commerce, and must not be decried simply because, like every other institution, however useful, it is open to serious abuse. It is the outcome of steam and electricity, and farmers may as well try to abolish these inventions as the direct outcome of them. Formerly they were content to gradually market their crops and spread the process out over the whole year. Now they are eager to dispose of them as rapidly as they are gathered, and concentrate their attention upon the preparation and cultivation of the next. If they will no longer carry their fair proportion someone must be found willing to take their place, and the burden has generally to fall on the shoulders of the much-abused speculator. With the enormous increase of production all the world

over, it is quite certain that shippers and merchants could not, if they would, handle and hold one-half or two-thirds of a season's yield in three or four months unless outside assistance were forthcoming, and the continued pressure to sell when buyers were loaded up would lead to the inevitable result of a serious break in prices.—*Pall Mall Gazette.*

SHORTAGES AT CHICAGO.

An interview with several well-known and reputable hay commission men of Chicago brought out an almost unanimous opinion that the failure of shipments to weigh out according to bills of lading resulted from thefts of the hay while side tracked at the hay terminals of the various railroads, such as they are. Who steals the hay was not definitely explained, but that hay gets away before the shipper is given credit for it seems to be undisputed. It strikes us that the local hay receivers should regard the interest of their patrons of sufficient importance to make a united effort to locate the wrong-doers and abate the evil. The shippers have just cause for complaint against this point, and the commission firms cannot afford to allow the numerous protests to go unheeded.—*Hay There.*

THE MARKETS.

We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.

GRAIN REPORT OF SHANKS, PHILLIPS & Co., Memphis, Tenn., December 12.—The past thirty days have been peculiarly devoid of incidents of any character concerning cereals in this market, with the single exception of wheat products, which have advanced sharply and are now very steady. HAY is moving very freely with liberal receipts, and equally active demand, at prices as follows: Choice timothy \$13.00; No. 1 timothy \$12.00; No. 2 timothy \$10.50; choice clover mixed \$12.50; No. 1 clover mixed \$11.25; No. 2 clover mixed \$9.50; choice Kansas Prairie \$10.00; No. 1 Kansas Prairie \$9.00; No. 2 Kansas Prairie \$7.00; choice Arkansas Prairie \$6.00. CORN.—Receipts more liberal; all from local points. Market steady at 44 cents for No. 2 White; 43 cents for No. 2 Mixed. OATS.—Demand good. No. 2 White 35 cents; No. 3 White 33½ cents; No. 2 Mixed 33 cents; No. 3 Mixed 32 cents. WHEAT BRAN.—Large sacks \$14.00; 100-pound sacks \$14.25. WHEAT.—No. 2 soft winter red 53 cents. FLOUR.—Winter wheat patents (in wood) \$2.70@2.80; extra fancy \$2.45@2.50; fancy \$2.15@2.20. CORNMEAL.—Standard roller (in wood) \$2.05@2.10; 48-pound cotton sacks 48½@50 cents per sack. Movement light.

GRAIN REPORT OF COLLINS & Co., Cincinnati, December 8.—There is no particular change to note in the market, with the possible exception that trade is inclined to rule a little more quiet toward the near approach of the holidays. Notwithstanding the volume of receipts the demand continues to rule fair both for local consumption and shipping account, and values continue to be well maintained. WHEAT.—The offerings are small with the demand principally for local account at steady prices. No. 2 Red at 53½@54 cents; No. 3 at 52@52½ cents. CORN.—Not moving so very freely, but the market is ruling not quite so active, and the No. 2 grades are slightly lowering owing to the improved condition of the quality of the No. 3 grades, which are generally given the preference on account of the difference in the price. We quote No. 2 White at 44@44½ cents; No. 3 at 43@43½ cents; No. 2 Yellow and Mixed at 44@44½ cents; No. 3 at 43@43½ cents; cool and sweet samples too damp to grade No. 3 at 41@42 cents. EAR CORN.—The receipts continue to be in fair volume, and are fully ample for the requirements of the trade. We quote choice yellow at 42@42½ cents; Mixed at 41@42 cents; White at 41@41½ cents. OATS.—The market is ruling a little higher, owing to the very few arrivals, but the demand is not so very urgent. No. 2 White at 34@34½ cents; No. 3 at 33@33½ cents; No. 2 Mixed at 32½@33 cents; No. 3 at 31@31½ cents, the market closing steady.

RYE.—There is a fair inquiry at the higher quotations with the offerings small; No. 2 at 55@55½ cents. HAY.—Receipts for the week 2,084 tons—shipments 1,113 tons; for the corresponding week last year the receipts were 1,241 tons, shipments 330 tons. The volume of arrivals continues to be well maintained, but with a good inquiry for shipping account, the market has ruled fairly active at the lower prices ruling. Choice timothy at \$10.50; No. 1 at \$10.00@10.25; No. 2 at \$9.00@9.25; clover mixed at \$8.50@9.00; pure clover at \$8.50@9.00. STRAW.—Bright clean wheat at \$4.25@4.50 per ton. MILL FEED.—Easy. Middlings at \$13.50@14.50. Bran at \$12.50@13.00.

GRAIN REPORT OF L. NORMAN & Co., LIMITED, London, November 26.—Since our last report the wheat trade, though steady in tone, has ruled quiet, and prices a trifle easier. For the moment buyers have satisfied their immediate requirements and the weaker tendency in the American markets has combined to bring about this relapse. ENGLISH WHEAT remains firm, the supplies being small, but the high prices asked prevent business. FOREIGN WHEAT.—A fair business has been done, especially in Russians. White wheats are firm and maintain their values. LA PLATAS.—During the week a sailer off the coast sold at 21s 9d; new crop sailer February-March sold to-day at 21s 1½d, and for March-April shipment 21s 3d. CALIFORNIANS.—A cargo of No. 1 sold at 24s 9d. AUSTRALIANS have met with fair inquiry, and parcels of Victorian have sold at 23s 9d. RUSSIANS.—A large business has again been transacted at prices from 18s 6d for common Ghirka to 23s for fine Azima. AMERICANS meet with little inquiry owing to the high prices asked. Red winters during the week sold at 22s, at which price there are further sellers. CANADIANS steady but quiet. Parcels on passage or for November-December shipment are offering at 24s 4½d, and for December-January 24s 7½d. BARLEY.—Has ruled quiet during the week. Toward the close, however, there has been more inquiry for cargoes of feeding quality. Parcels remain neglected. Odessa & Nicolajeff for November-December shipment is offering at 12s 3d and for December-January at 12s 6d without finding buyers. MAIZE.—For Odessa cargoes market is quiet, but near at hand or prompt parcels are firm. A 1,000-quarter parcel Old Odessa, shipment in 14 days, sold at 21s 9d. New

crop December-January is offering at 19s 9d. American mixed slow trade and little passing. December-January shipment offering at 20s 10½d, but no buyers. OATS.—With heavy arrivals the market is quiet and easier. South Russians guaranteed 34-35 pounds are offering at 12s but find no buyers. PEAS.—Quiet. White Canadians offering from 23s 3d to 23s 6d. HAY.—No change since our last and quotations nominal.

FLAXSEED AT CHICAGO.—The steamer Spokane unloaded a cargo of 55,000 bushels flaxseed December 6 at one of the Armour elevators, and the trade sees in the operation the reflection of a "deal" either under way now or soon to be uncovered. The flaxseed was loaded from Buffalo here, and the movement is as abnormal and unusual as was the loading of wheat from Toledo here last summer. It was sent down to Buffalo a number of weeks ago by the Dickinson company and was brought back here by the same concern. Shrewd people like the Dickinsons are quietly bringing what flaxseed they can find back to this market. The cargo was originally from the Lake Superior country, and was shipped from there to Buffalo. The action of the Dickinsons is explained in one of two ways. Either they are short December or they are anticipating that flaxseed will be a much sought article in this market before December 31. The unexpectedly poor quality of the latest crop is what has played havoc with the plans of the majority of the people interested in flaxseed. Minneapolis is a heavy seller for December delivery in this market against contract stocks supposed to be in the country. When the seed began to reach the market it was found that fully two-thirds of what had been expected to pass on contracts would not grade. This leaves the Minneapolis people, and many traders here and elsewhere who had figured on a similar basis, with small stocks and slim prospects for securing the seed to fill contracts. The National Linseed Oil Company had the good fortune or the foresight to have grabbed up a considerable proportion of the December offering, and are undoubtedly in a position to give certain ones a nervous attack if not an absolute squeeze. Brokers for the National are paying close attention to keeping values from sagging, but it is scarcely time for a squeeze yet, for the reason that if prices were advanced much just now the scrapings of the country would be run in here and stocks replenished. Any number of receivers have in hand orders to sell No. 1 flax to arrive at \$1.50. Consequently, a squeeze, if one is to come, will be deferred till toward the close of the month. The probability is that most of the December shorts will be given a chance to cover between \$1.46 @1.50. This year's crop was totally unlike anything known before. So much of the seed came in damp and green that new methods had to be devised to handle it. At first the crushers were decidedly suspicious of the rejected seed. It clogged the rollers and in other ways did not crush well. The mills have resorted to new methods of drying the seed, and there is a possibility that the rejected will turn out better results in oil than was expected. The rejected sells at a discount of 10@15 cents under No. 1. It is not outside of the possibilities that Calcutta flaxseed may sometime make situations like the present one hard to bring about. On the authority of a concern closely in touch with the foreign business it is stated that Calcutta flaxseed as good as American No. 1 can be laid down in New York for January delivery at \$1.35, or 10 cents under the present price of May in this market.



A. B. Robbins of the Northwestern Elevator Company, Minneapolis, has been elected a member of the state legislature on the Republican ticket.

W. B. Carter, bookkeeper for the Dent Grain Company of Sioux City, Iowa, has slyly turned benedict. He went to Milwaukee recently and when he returned he took a bride with him.

J. A. Mabey, one of the largest grain merchants of Lake City, Minn., usually spends his winters in the sunny South. He has arrived at New Orleans, where he intends to stay for some time.

P. T. Hamm, a venerable grain merchant of Kansas City, was recently presented with a gold headed ebony cane on the occasion of his 67th birthday. Engraved upon its head was the following explanation: "Presented to P. T. Hamm by the members of the Kansas City Board of Trade, Nov. 24, 1894."

Recently 16,000 bushels of No. 1 Hard Wheat were sold in Liverpool at .6788 cents, and on the same day that grade sold at Duluth at 58½ cents. Allowing .136 cents for transportation charges, there would have been a loss of .0397 cents per bushel on the deal had the contract been filled with grain shipped direct from Duluth.

What is a "line?" The United States Supreme Court will decide the question next January. If it is declared to be the route between any two points, though contained wholly within another line starting at the same point but having a different terminal, it will deprive the interstate commission of power to determine charges to different points on the same line.

A grain dealer at Chebanse, Ill., has brought suit against the Illinois Central Railroad Company to recover damages of \$1,000 for failure to transport grain consigned for shipment. The failure to deliver was at the time of the railroad strike at Chicago last summer. As it was impossible to run into Chicago the shipment was sidetracked for about a month. This is regarded as a test case, and the outcome will be looked forward to with interest. The road received when it knew it could not deliver the grain.

LOCATIONS FOR FACTORIES.

The name of the Chicago, Milwaukee & St. Paul Railway has long been identified with practical measures for the general upbuilding of its territory and the promotion of its commerce, hence manufacturers have an assurance that they will find themselves at home on the company's lines.

The Chicago, Milwaukee & St. Paul Railway Company owns and operates 6,150 miles (9,900 kilometers) of railway, exclusive of second track, connecting track or sidings. The eight states traversed by the lines of the company, Illinois, Wisconsin, Northern Michigan, Iowa, Missouri, Minnesota, South Dakota and North Dakota, possess, in addition to the advantages of raw material and proximity to markets, that which is the prime factor in the industrial success of a territory—a people who form one live and thriving community of business men, in whose midst it is safe and profitable to settle. Many towns on the line are prepared to treat very favorably with manufacturers who would locate in their vicinity.

Mines of coal, iron, copper, lead and zinc, forests of soft and hard wood, quarries, clays of all kinds, tan bark, flax and other raw materials exist in its territory in addition to the vast agricultural resources.

A number of new factories have been induced to locate—largely through the instrumentality of this company—at towns on its lines. The central position of the states traversed by the Chicago, Milwaukee & St. Paul Railway makes it possible to command all the markets of the United States. The trend of manufacturing is westward. Nothing should be permitted to delay enterprising manufacturers from investigating. Confidential inquiries are treated as such. The information furnished a particular industry is reliable. Address

LUIS JACKSON,
Industrial Commissioner, C., M. & St. P. R'y,
425 Old Colony Building, Chicago, Ill.

A Piano at a Nominal Price.

Chicago's largest music house, Lyon & Healy, moved into a magnificent new building some little time ago. They have a number of slightly used and second-hand pianos returned from World's Fair renting, etc., etc., which they have determined to sacrifice rather than to continue to make room for. These instruments comprise Square pianos at \$40, \$65, \$90, \$100, and \$125. Upright pianos at \$125, \$140, \$150, \$165, \$190, \$200, \$225, \$240, and upward. Grand pianos at \$200, \$250, \$300 and upward. Nearly all originally sold for from two to four times their present price. Almost all prominent makes are represented, including among numerous others: Chickering, Knabe, Steinway, Weber, Decker, Steck, Fischer, etc. This is an opportunity that will not occur again, as Lyon & Healy have not moved for twenty years. Immediate attention is therefore necessary. A good plan would be to order a piano, leaving the selection to Lyon & Healy. However, they will send a list and full particulars upon application. Any piano not proving satisfactory may be returned at their expense. Address at their new salesrooms, corner Wabash Avenue and Adams St., Chicago. Distance is no obstacle in taking advantage of this remarkable chance to obtain a piano, for in proportion to the saving to be made the freight charges are insignificant. If you do not already know them by reputation any banker will assure you of Lyon & Healy's entire responsibility and record of over a third of a century for honorable dealing. Write today so as to avoid disappointment.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

GRAIN BUYER WANTED.

Wanted—Grain buyer for the new elevator at Culver, Ind., a small shipping house in good locality. References required. Address

W. I. ROSEBERRY, Coleman Bank Building, Lafayette, Ind.

COUNTRY BANK STOCK WANTED.

I have frequent calls for good country bank stocks, and solicit letters of inquiry from parties having such stocks for sale. Address

J. H. HUNT, dealer in stocks and bonds, member of Chicago Stock Exchange, 69 Board of Trade Building, Chicago, Ill.

PARTNER WITH CAPITAL WANTED.

A grain elevator architect desires to meet a gentleman of some means for the purpose of forming a partnership in constructing and building elevators. A business man experienced in the building line preferred. Address

ARCHITECT I, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

EXPERIENCED ELEVATOR BOOKKEEPER WANTED.

Wanted—A middle-aged man who has had experience in keeping a set of elevator and farm books. Prefer one who can inspect grain and make statement of business every night. Business situated in country town. Must be able to begin work January 1. Address

S. S., care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

ELEVATOR WANTED.

I wish to lease, with the privilege of buying in six months or a year, a good elevator in a good town. Elevator must do a business of over 250 cars of grain annually. I have for sale one first-class three roller feed and meal mill, one first-class cob feed mill with belts, shafting and pulleys. Cheap. Address

No. 1 ELEVATOR, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. No POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robert Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., wholesale agents, Chicago, Ill.

DAVIS' GRAIN TABLES.

The value of wheat or any grain at 60 pounds to the bushel, for any amount less than 100 bushels is shown without addition or multiplication, and for any amount over 100 and under 1,000 bushels, with but a single addition: at any price from 25 cents to \$1.25 per bushel. The value of bushels and pounds of other grain also is shown at 56, 48 and 32 pounds to the bushel at any price from 15 cents to \$1.50 per bushel. Price, postpaid, \$1.25. Address

E. D. DAVIS, 520 Nicollet Ave., Minneapolis, Minn.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

ELEVATOR SEPARATOR.

One new No. 3 Barnard & Leas Elevator Separator for sale. Address

SIMPSON & ROBINSON Co., 71 Commerce building, Chicago, Ill.

PATTERNS FOR GAS ENGINES FOR SALE.

For Sale—The complete patterns for 4 sizes of gas and gasoline engines all ready for the market. Over 25 already three years in use. Good testimonials. See them running. If you mean business address

GAS AND GASOLINE ENGINES, care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago, Ill.

GRAIN ELEVATOR FOR SALE.

Steam power grain elevator on Chicago & Alton Railroad in Missouri for sale. Convenient to Chicago, St. Louis and Kansas City. Corn sheller, scales, offices, etc., complete. Good opening for lumber business in connection. Splendid grain country. Healthy location. Now in operation and rented to good advantage. Would accept other good property in part payment. Address

J. G. M., Box 656, Washington, D. C.

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Jennings' N. E. Telegraph Cipher contains many novel ideas, and is complete with instructions as to buying, selling, ordering, market advices, offers, bids, finance, bill lading, instructions, freight inquiries and advices, shipping inquiries and instructions, guaranteeing, etc., such as no other cipher contains. It is now in use with the principal shippers and dealers in flour, grain and feed. It is invaluable to shippers of corn and oats. For general shipping business it is superior to any other telegraph code. Send for list of users, which is the best argument in its favor. It is also a directory of the New England grain dealers. Sent postpaid on receipt of price, \$3. Address

HENRY JENNINGS, 613 Chamber of Commerce, Boston, Mass.

GRAIN ELEVATOR FOR SALE.

A 40,000-bushel capacity elevator with new 15-horse power gasoline engine for sale. Large, fine office and oathouse and crib. Advantages—good surrounding country, crop failure unknown, enormous crops this year, small competition, Fairbanks' Track Scales, power car mover, cheap insurance. Liberal terms. The elevator is situated in a thriving town in Illinois. is doing a large business, and is comparatively new and in excellent repair. To anyone who is desirous of doing a banking business in connection with the grain business the opportunity is excellent. Good dwelling house in connection if wanted. Price \$8,000; terms \$2,000 cash, balance in six annual payments. Good security required. Address

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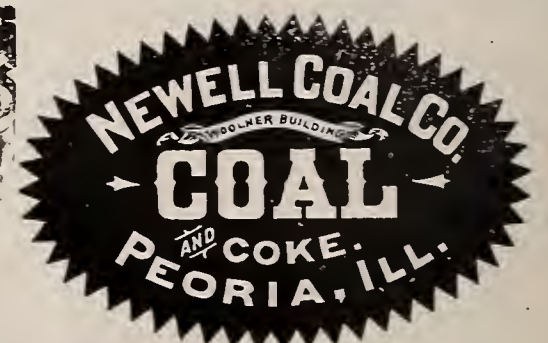
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Minneapolis,

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COMMISSION MERCHANTS,

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Melrose Station, New York City.



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HAY, GRAIN AND FEED.

Storage capacity, 8,000 bales, 30,000 bushels.
Let us know what you have to offer.

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L. Bartlett & Son,

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Careful attention given to orders from Brewers, Maltsters and Millers.

Grain for Seed, Feed and Milling.

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Also Mixed Corn, White Oats, Mixed Oats and Choice Red Winter Milling Wheat. Elevators and Storage along the Line of Wabash Ry., J. S. E. Ry., C. & A. Ry., and St. L. C. & C. P. Ry. in Central Illinois.

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We use Robinson's or Jennings' Cipher.

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Shipper of Wet Feed,

From Chicago, Milwaukee and La Crosse.

Shipments of grain and hay taken in exchange for feed at highest Chicago market prices. No charge for commission. Special inducements made on Wet Grain for silo purposes during May and June. Write for circulars and prices.

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Brewers' Wet and Dried Grains Screenings, Barley Sprouts, Hominy and Mill Feed.

Robert McKnight & Sons,

COMMISSION MERCHANTS,

AND DEALERS IN

GRAIN, FEED AND HAY,

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REFERENCES: { Merchants' and Third National Banks,
PHILADELPHIA.

PAINE BROTHERS,

Grain Merchants,

28 CHAMBER OF COMMERCE,

MILWAUKEE, WIS.

Lessees of C., M. &
St. P. Elevator Co.BUY and SELL
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OATS

We deal very largely in Oats and Barley, shipping by cargoes, and also handle considerable quantities of Wheat.

BARLEY

We have special facilities for drying damp grain, and are always ready to buy low-grade Wheat, Barley or Oats, as well as Barley

WHEAT

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Screenings and Wheat Screenings.

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We are always ready to make cash bids, free of commission,

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railroad receipt for 3/4 value, making final

WHEAT SCREENINGS

returns next day after shipment arrives.

MILL FEEDS

We buy west and north of Chicago, and sell east and south of Chicago.

Send us samples, quoting prices on anything you have to offer; or we will submit bids, if requested.

Milwaukee weights and inspection to govern all transactions when shipments touch this point.

We can handle goods over Northwestern Line, and most other roads, as readily as over the C., M. & St. P.

Unquestionable references furnished on request.

PAINE BROS.,

28 Chamber of Commerce, MILWAUKEE, WIS.

The Incline Elevator and Dump.

Patented April 3, 1894.

It is **THE NEW WAY** of elevating ear corn, shelled grain or minerals into car or storage bin.

Its cost is so small that it is practical for farm use.

Its pulley blocks are roller bushed and steel, reducing friction to a minimum.

With it ear corn can be cribbed with less expense than with a scoop, if cost of storage is considered.

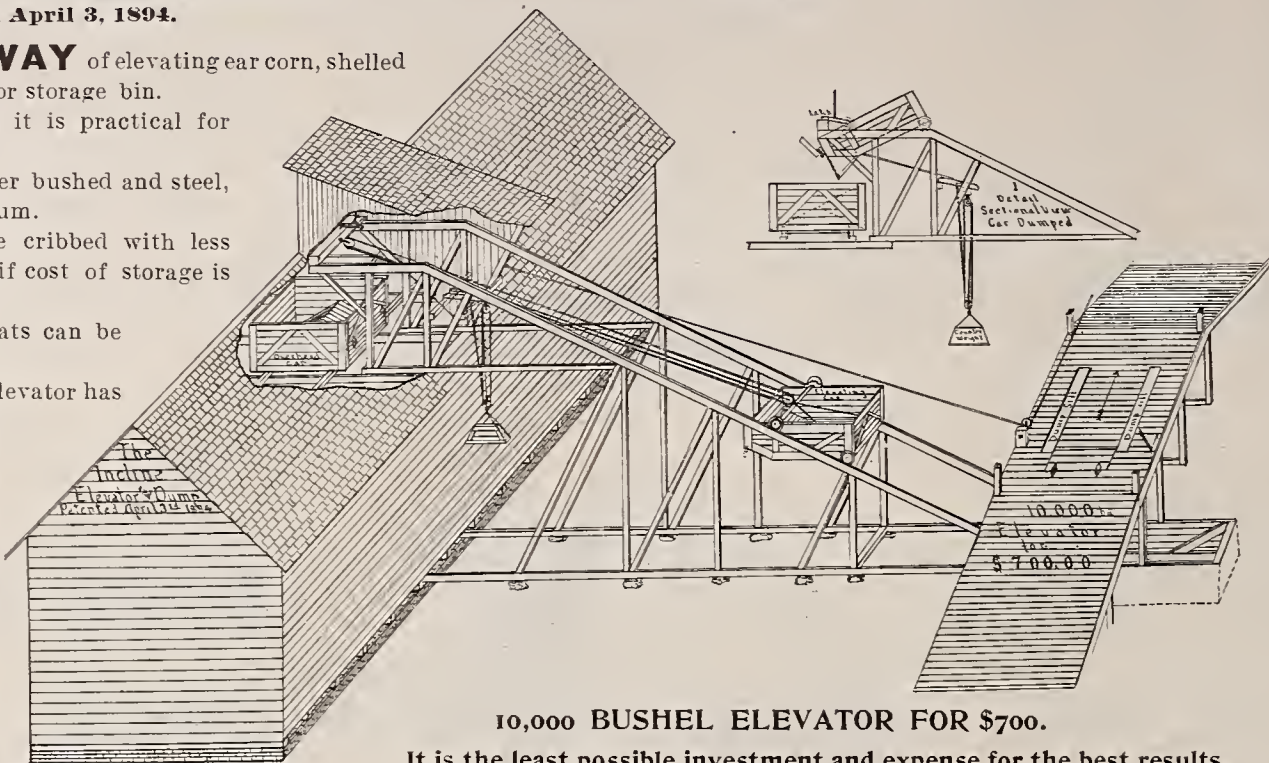
With it 3,000 bushels of oats can be elevated in one hour.

With it a grain dealer's elevator has the following advantages:

Every team elevates its own load, thereby the power for elevating is obtained without cost.

A whole load is elevated at a time and dumped at the top, making it practical to use an overhead car by which at the same cost you obtain more shipping bin capacity alone than all the storage and shipping bin capacity of a belt elevator.

Cleaning machinery can be adjusted with unusual convenience.



10,000 BUSHEL ELEVATOR FOR \$700.

It is the least possible investment and expense for the best results.

Manufactured by

H. KURTZ & SON, Mansfield, Ill.

A NEW plan of chute, leading from ship-ping bin to railroad car, is used, through which either ear corn or shelled grain will pass equally well. The overhead car having a capacity of 100 bushels can be completely filled without moving.

A safety ratchet holds every inch elevated and prevents a crash should a break occur; and the teamster can unfasten rope without getting out of his wagon.

Going to Buy a Scale?

If so, read a few opinions of Prominent Elevator People on the Merits of the Demuth Check Beam.

C. A. PILLSBURY, Prest. G. W. PORTER, Treas. and Mgr. K. R. GUTHRIE, Secy.

GENERAL GRAIN DEALERS. ATLANTIC ELEVATOR COMPANY, Incorporated. Elevators on Minneapolis, St. Paul and Sanit St. Marie Ry. MINNEAPOLIS, MINN., May 25, 1893.

DEAR SIR:—Replying to yours of the 22d, would say that we have the Check Beams on twelve (12) scales in our Atlantic "A" elevator, and like them very much. We find them a valuable check on the weighman, and good for reference to check up with. Yours truly, K. R. GUTHRIE, Secy.

NEW YORK CENTRAL LIGHTERAGE CO. NEW YORK CENTRAL ELEVATORS. 1 and 3 Beaver Street. New York, May 26, 1893.

Gibson L. Douglass, Mgr. WEST SHORE ELEVATOR. DEAR SIR: We are using nineteen "Check Beams" on the Fairbanks scales at N. Y. C. & H. R. R. elevator, and sixteen at the West Shore R. R. elevator. Have discovered a number of errors through their use during the past two years, and consider them a good thing. Yours truly, G. W. PHELON, Supt.

ARMOUR ELEVATOR CO., Rooms 1111 and 1112, 205 La Salle Street. Elevators on C. M. & St. P. Ry., and C. B. & Q. Ry., Chicago. Total Capacity 9,000,000 Bushels. CHICAGO, May 26, 1893.

J. A. DEMUTH, 40 Elm Street, Oberlin, Ohio. DEAR SIR:—Yours of the 22d inst. in reference to Check Beams in use on our Fairbanks scales. Would say that we have in use 35 of the Check Beams on scales at our elevators, and consider them invaluable for accurate weighing. Yours very truly, ARMOUR ELEVATOR CO.

PADDOCK, HODGE & COMPANY, GRAIN MERCHANTS. 29 and 30 Produce Exchange. J. A. DEMUTH & CO., Oberlin, O. TOLEDO, OHIO, June 28, 1893.

DEAR SIR:—In reply to you favor of a recent date: We have had our Fairbanks scales supplied with your double entry system since last November, and in errors detected and corrected, for and against us, it has more than paid for itself, to say nothing of the satisfaction of knowing that our weighman's entries are absolutely correct after they have been balanced up by your system. Dictated by J. H. Yours truly, JAMES HODGE, Secy and Treas. Toledo Elevator Co.

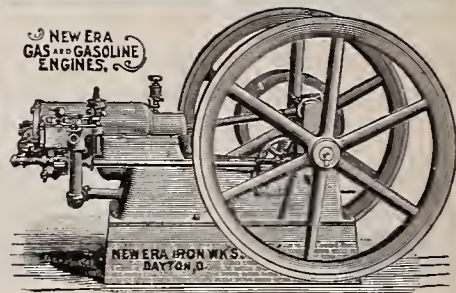
Furnished only with Fairbanks Scales

ELEVATOR FOR SALE OR LEASE.

The Central Elevator of Pittsburg, Pa., is for sale or lease on favorable terms. The storage capacity is 250,000 bushels, equipped with Corn Sheller, Grain Cleaner, Steam Shovels, and three (3) Portable Chopping Mills. This Elevator is situated in the midst of a compact population of 500,000 persons, and is connected East and West with all the tracks of the Pennsylvania system. The demand for chopped feed is very great in this locality. For a good live man with some capital there is a splendid opportunity. Good reasons given for selling. For further information address,

T. L. RODGERS, Secretary, Pittsburg, Pa.

GAS ENGINES



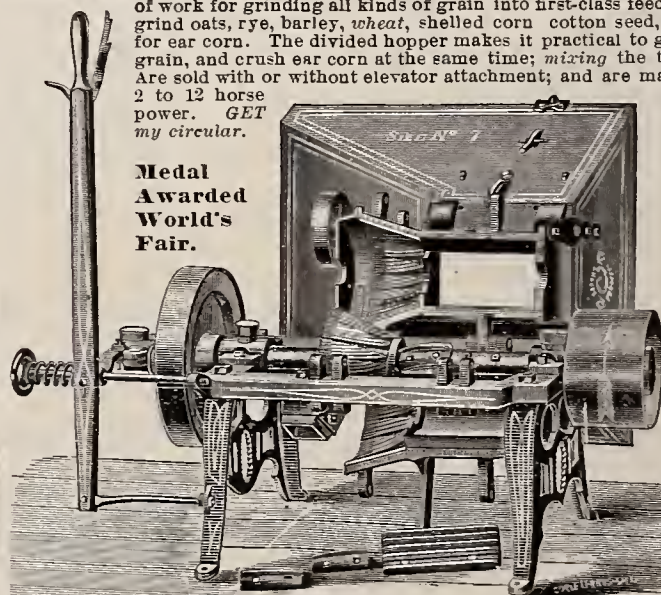
PERFECT POWER } Costing from 1/4 to 1 cent per H. P. actually used per hour.

For full particulars, address: NEW ERA IRON WORKS, DAYTON, OHIO.

THE BEST ALL-AROUND FEED MILL.

The conical burrs give large capacity with moderate power. Ahead of rolls or burrs in speed and quality of work for grinding all kinds of grain into first-class feed. Will crush corn and cob, and grind oats, rye, barley, wheat, shelled corn cotton seed, oil cake, etc. Has self-feeder for ear corn. The divided hopper makes it practical to grind oats, wheat, or other small grain, and crush ear corn at the same time; mixing the two in any proportion desired. Are sold with or without elevator attachment; and are made in three sizes, ranging from 2 to 12 horse power. GET my circular.

Medal Awarded World's Fair.



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WE SEND THE

American Miller and the American Elevator and Grain Trade

Both for One Year for \$2.50.

Address MITCHELL BROTHERS COMPANY, Chicago.

An Offer to Hay and Grain Men.

THE AMERICAN ELEVATOR AND GRAIN TRADE,

\$1.00 PER YEAR.

Monthly.

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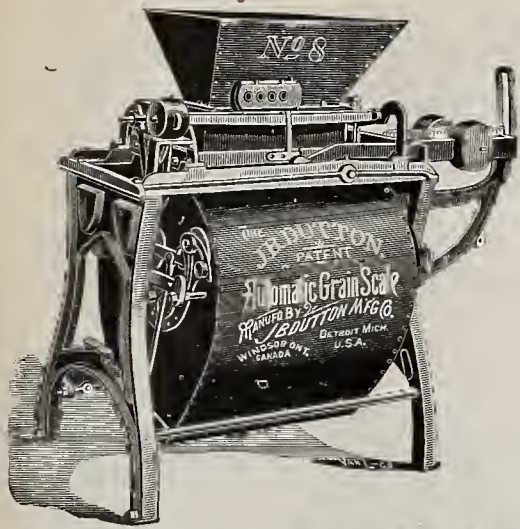
Weekly.

BOTH FOR \$2.00.

ADDRESS EITHER

The Hay Trade Journal, OR Canajoharie, N. Y.

Mitchell Bros. Co., 184 and 186 Dearborn St., Chicago, Ill.



J. B. DUTTON'S Patent Automatic Grain Scale,

FOR USE IN
ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.

ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL
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POWER TRANSMITTING
MACHINERY.



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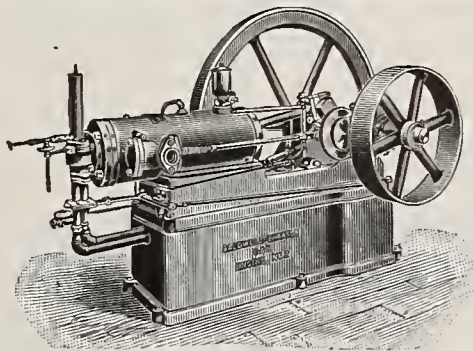
Manufactured exclusively by us at Chicago, with latest improvements.

AUTOMATIC POWER GRAIN
SHOVELS.
SOUTH BEND WOOD SPLIT
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SPROCKET WHEELS, LINK BELTING, ELE
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AVERY SEAMLESS STEEL
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2 TO 75 ACTUAL HORSE POWER.

These engines use gasoline from tanks lower than the engines. They are
simple, reliable and safe. We build them substantially, of best
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AMERICAN MILLER.

PUBLISHED BY

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\$2.00 PER YEAR.

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EAGLE BRAND THE BEST!

It is superior to any other roofing and unequalled for House, Barn, Factory or outbuildings; it costs half the price of
shingles, tin or iron; it is ready for use and easily applied by anyone; it is the best roofing in the market, in durability, to
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SEND FOR SAMPLES. **RUBBER PAINT** NO TAR USED.

The best known paint in the world for tin, iron or shingle roofs, fences, sides of barns and outbuildings; it costs only
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Grain Elevator Machinery of Every Description,
Power Car Pullers, Steam Shovels,
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OFFICES, COR. CLARK & SIXTEENTH STS., **CHICAGO, ILL.**

WILL NOT FREEZE.

IMPOSSIBLE

TO CLOG UP FROM DUST,

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So Simple to Use,

REASONS WHY

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Are being adopted by so many of the Elevator
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Miller Chemical Engine Co.,

13 N. State Street, - - CHICAGO.

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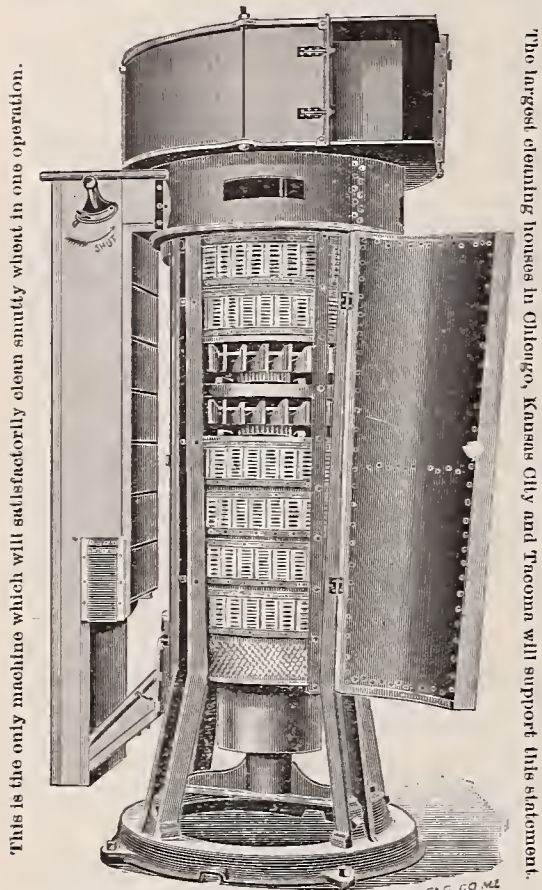
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For long and short
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MONEY MAKING MACHINES.

The Iron Prince

The Prinz Improved Grader and Separator.

BUILT FOR RECEIVING AND MILLING SEPARATORS.



This is the only machine which will satisfactorily clean shabby wheat in one operation.

The largest cleaning houses in Chicago, Kansas City and Tacoma will support this statement.

This Separator contains all the latest improvements, among them are many entirely new and very valuable ones. It has a force feed, double suction, side shake, is made with or without attachment of cockle separator; entirely dustless, and is built for a capacity from 500 to 2,500 bushels.

THE SIEVES

Are constructed on an entirely new principle. Write for explanation of the same and you will be delighted by it.

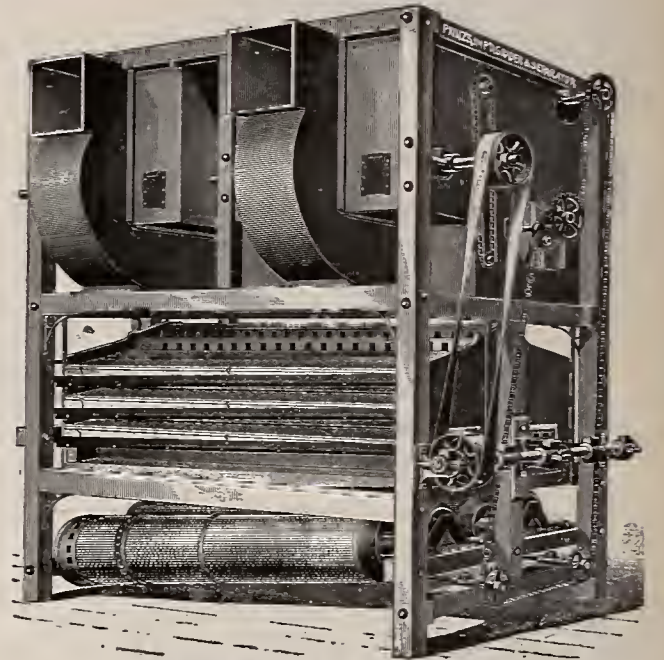
G. J. ZIMMERMAN, Grain Dealer,
No. 204 FLORIDA STREET.

MILWAUKEE, May 8, 1894.

Messrs. Prinz & Rau Mfg. Co., Milwaukee, Wis.

GENTLEMEN:—Have used your Grader and Separator for cleaning barley and wheat for the past two years, with the very best of satisfaction. They do all the work required of a machine of that kind and do it thoroughly. Respectfully yours,

G. J. ZIMMERMAN.



Cut Shows Machine with Cockle Attachment.

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WM. & J. G. GREEY, Toronto, Ont., Sole Manufacturers in Canada for the Prinz Cockle Machines.

THE SMITH PNEUMATIC TRANSFER AND STEEL STORAGE SYSTEM.

Now in Successful Operation at Toledo, Ohio.

This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

It was on exhibition at the World's Columbian Exposition of 1893, and was awarded four highest medals and diplomas and received in addition thereto the highest indorsement of the principal officers of the Exposition as well as of the highest authorities in all industries to which it is applicable.

The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

The policy of the Company in regard to the introduction of its system is to make such liberal and easy terms with all who desire to use it that there will be no cause for complaint.

Full particulars furnished on application in person or by letter to

The Smith Pneumatic Transfer & Storage Co.

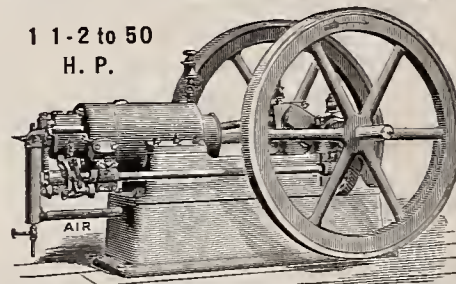
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THE SIMPLEST ENGINE IN AMERICA.

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FULLY GUARANTEED
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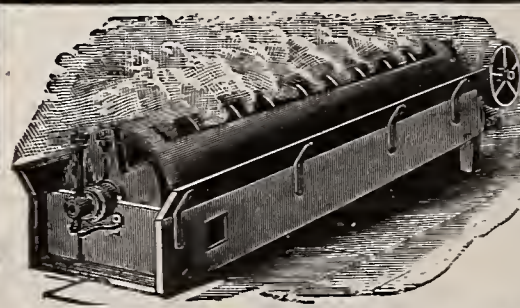


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A Simple, Steady and Reliable Power.

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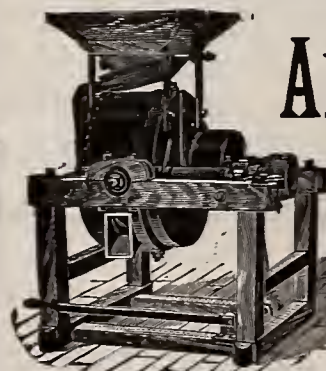


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For Cornmeal, Hominy, Buckwheat, Rice, and all kinds of Cereal Products; also Sand, Coal dust, etc.

Drying Cylinder made entirely of iron. The machine has few parts and is not liable to get out of order. Automatic in its operation, requiring no attention. Double the capacity of any other Dryer sold for same price.

USED AND RECOMMENDED BY LARGEST AND BEST MILLS.



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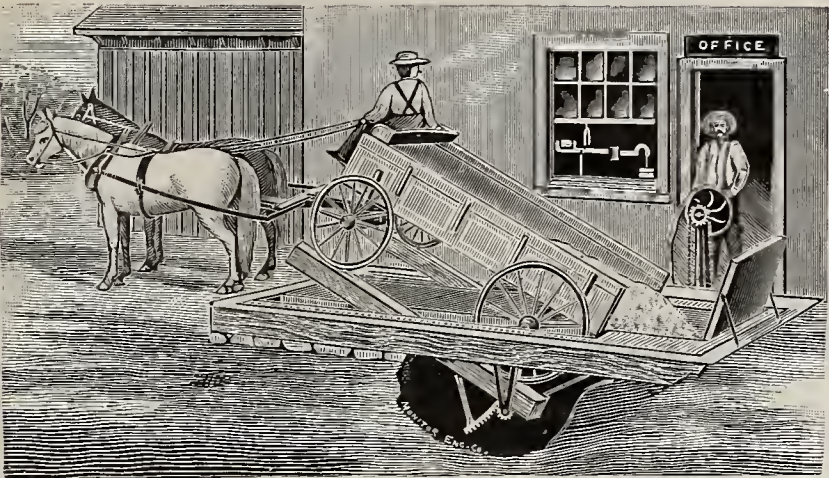
The adjustment is positive and automatic, utilizing every part of the grinding surfaces. Can be started or stopped at pleasure, without stopping the power. Is dressed without taking the shaft out of its boxee, or the belt off the pulley.

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PATENT WAGON DUMP

The only dump made that is always under the complete control of operator.

MESSRS. SAVAGE & LOVE, Rockford, Ill.

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In regard to your Wagon Dump, we will say that we have about twenty of them, which we have had in active service for the past four or five years, and in this time we have had very few breakages, and nothing of any serious nature, which we consider is very good. And taken all round we think them as good, if not the best dump made.

MESSRS. SAVAGE & LOVE, Rockford, Ill.

MINNEAPOLIS, MINN., August 9, 1894.

GENTLEMEN:—In answer to yours of August 9, will say that our dumps that we got from you have given us perfect satisfaction. Our buyers all say that it is superior to any dump they have seen. What they claim superior to other dumps is that they can be let part way down or all the way at pleasure. This helps them where they have sacks and large loads of wheat.

Dictated by J. F. Cargill.

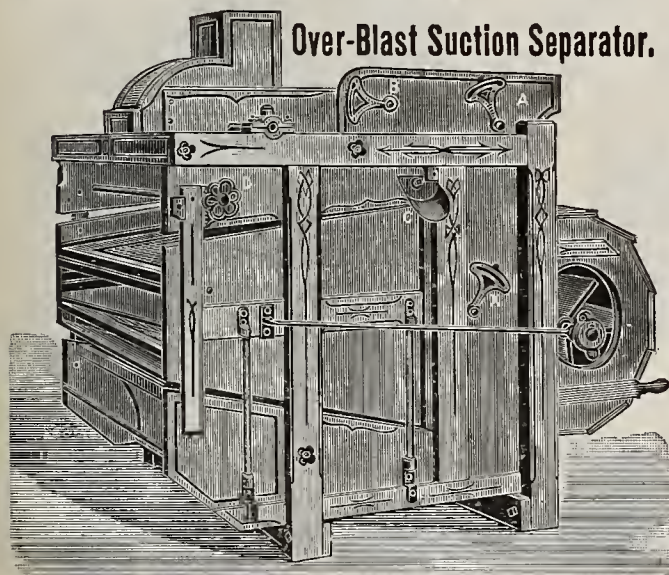
Yours truly,
CARGILL ELEVATOR CO.

Manufactured only by

THE SAVAGE & LOVE CO., Rockford, Ill.

Dealers in Shafting, Pulleys, Hangers, Leather and Rubber Belting and Elevator Supplies.

THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS.



THE STANDARD IN THEIR LINE.

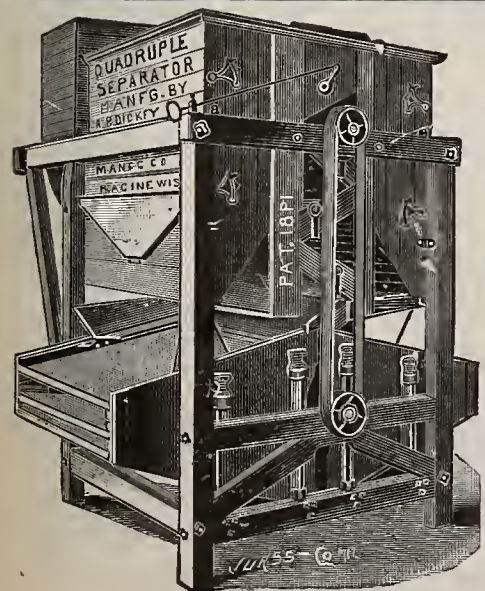
"Grain Cleaned to a Standstill."

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.

The Quadruple Suction Dustless Separator. Four separate suction, independent of each other with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

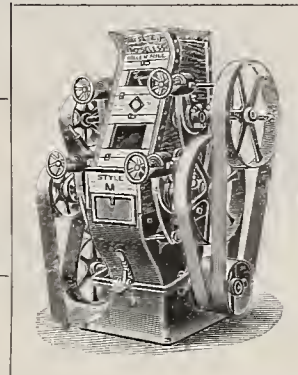
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This Will Be One of the Best Seasons Ever Known for Feed Grinding.

The Best Machines to do the Grinding with are Gray's.



We Build them in Four and Six Roll Styles

And Sizes to Meet All Requirements.

OUR PRICES ARE ALL RIGHT.

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SHAFTING, PULLEYS, BELTING AND

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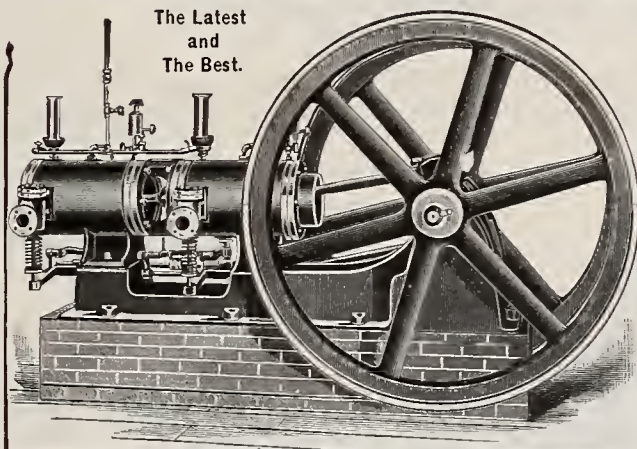
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RELIANCE WORKS.

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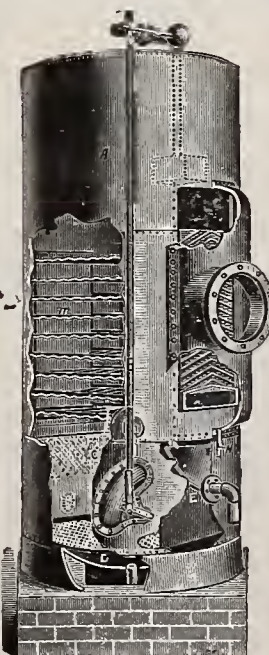
The Long Sought for Found at Last.

An impulse with every turn of the crank. Less gas or gasoline. Steadier motion. Easily started. Less space. Self adjusting in all its bearings. Price within the reach of all. Adapted to all uses, and as much better than the ordinary gas engine now on the market, as the Corliss steam engine is better than the common slide valve of twenty years ago. Two to one hundred horse power. Both vertical and horizontal.

Write for catalogue and prices.

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Lime Extracting Heater
Uses Exhaust Steam.
Separates the Oil from the Steam and Water. It Regulates the Feed. The Pipes Never Pound.
Prevents Scale in Steam Boilers. Removing all Impurities from the Water Before it Enters the Boiler.

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DAYTON, OHIO.

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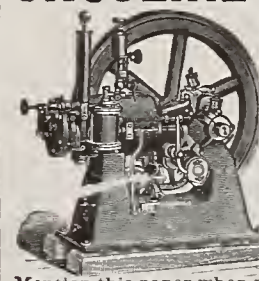
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Dwarfs in size and Giants in Strength.

Costs only 10 cents a Day per H. P. to run them, & scarcely any attention.

EVERY ENGINE GUARANTEED

Write for particulars and testimonials.
THE VANDUZEN GAS & GASOLINE ENGINE CO.
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Mention this paper when you write.



All Kinds.

HORSE and STEAM Power.

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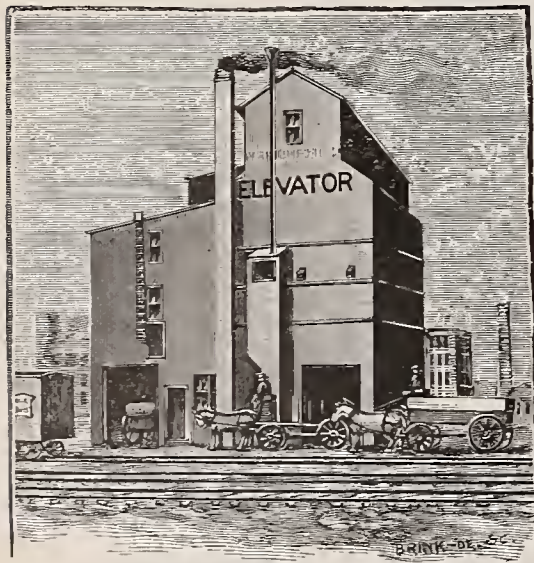
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Plans, specifications and estimates furnished on short notice.

Our Single Leg Rope Drive reduces fire risk and friction.

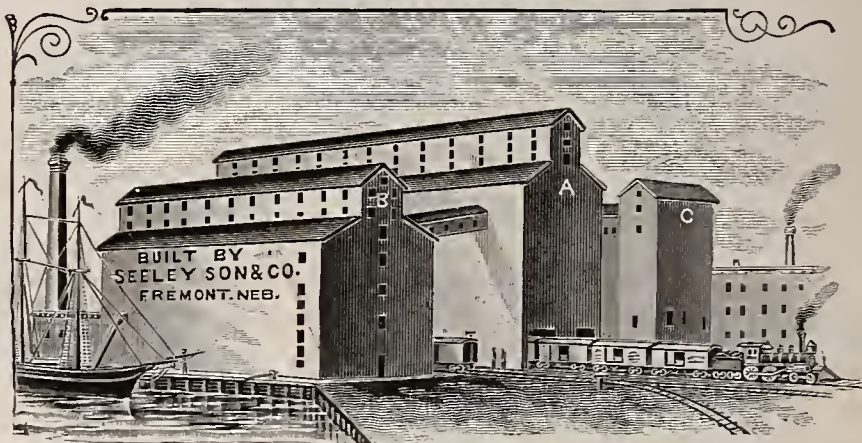
The Simpson Double Jointed Distributing Spouts economize space and labor.

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ARCHITECT AND CONTRACTOR OF

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ELEVATOR HORSE POWERS.



Cheapest, Most Efficient and Durable Power For an Elevator.

PERFECTLY GOVERNED.

A Steady Motion.

No Skilled Help Required to Operate.

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Grain Elevators

RAILROAD WORK AND HEAVY STRUCTURES,
ST. LOUIS AND BUFFALO.

Construction Department—Work in 1893.

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1,750,000-bushel Elevator, with three Marine Elevating Towers, for the Eastern Elevator Co., at Buffalo, New York.
500,000-bushel Storage and Cleaning Elevator for the Illinois Central Railroad Co., at New Orleans, Louisiana.

Just contracted for 1,000,000-bushel Elevator for the Coatsworth Estate, Buffalo, New York.

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Shops and 40 Stall Round House for Baltimore & Ohio S. W. R. R. Co., at Chillicothe, Ohio.
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500,000-bushel Elevator for the Orthwein Bros Commission Co., at St. Louis, Missouri.
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Fifteen (15) Passenger Stations in Ohio for the Baltimore & Ohio S. W. R. R. Co.

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Power House for the Cataract Construction Company, at Niagara Falls, New York.
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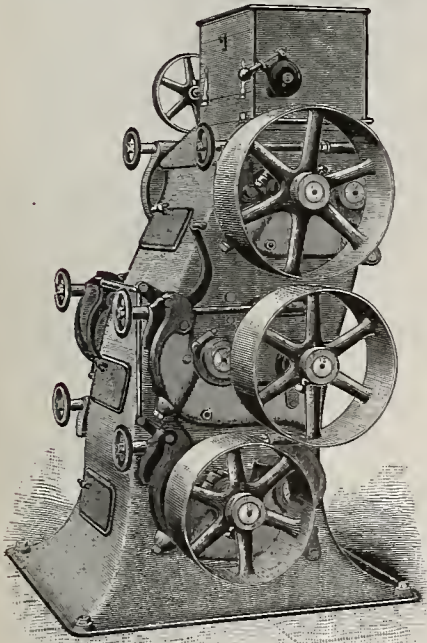
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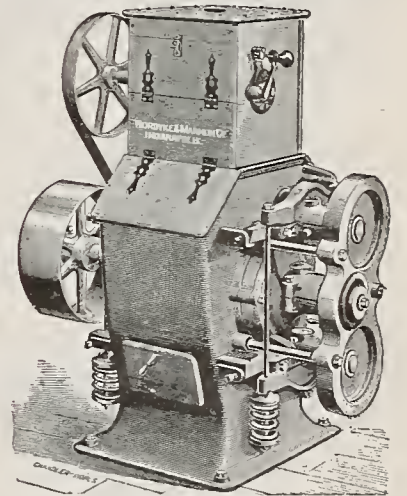


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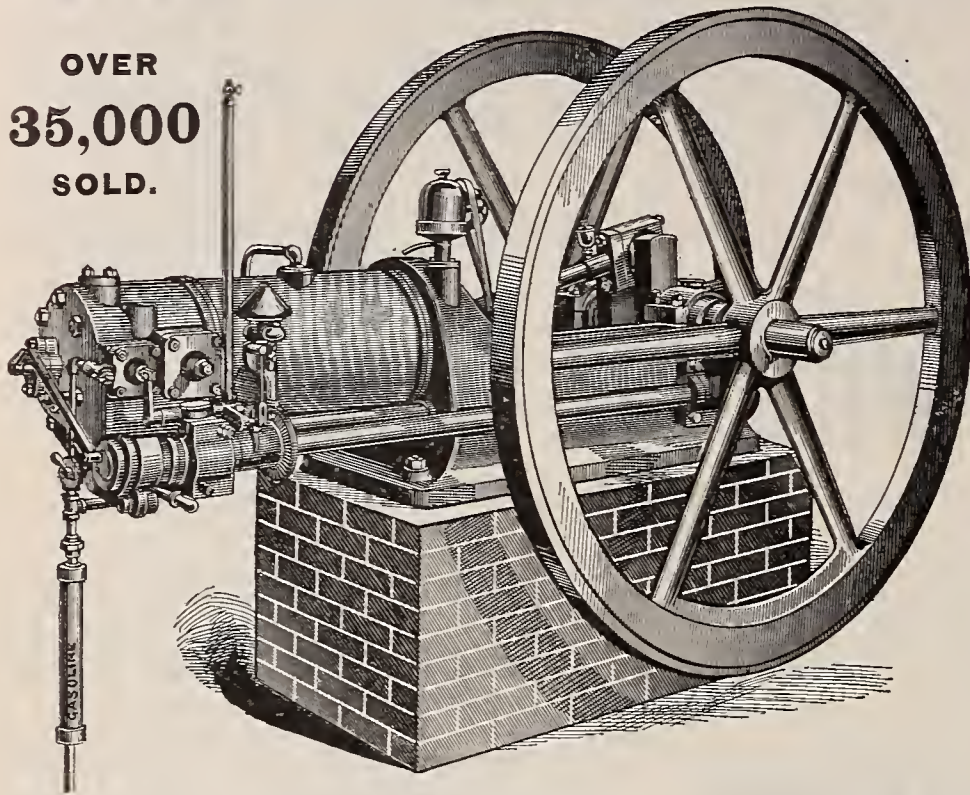
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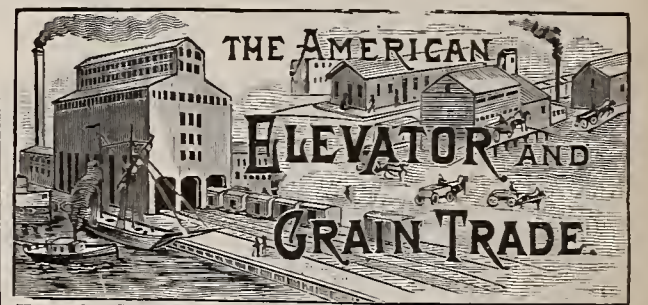
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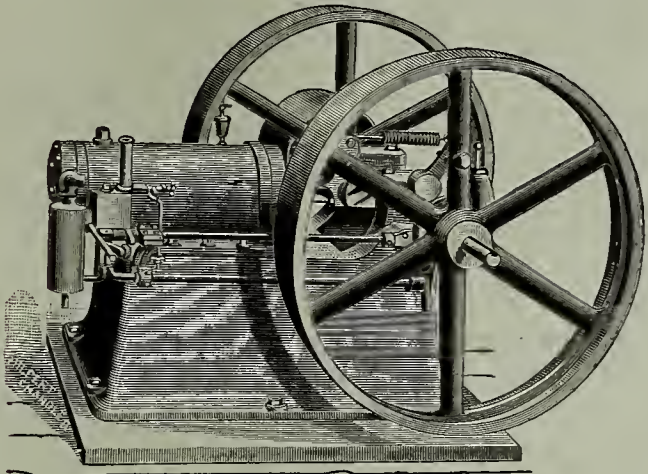
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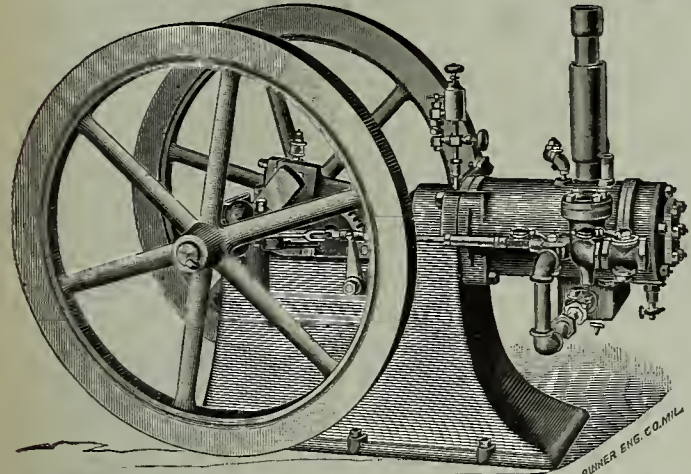
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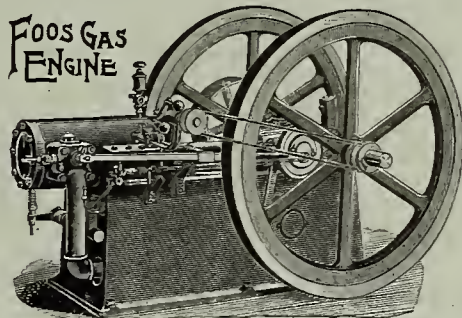
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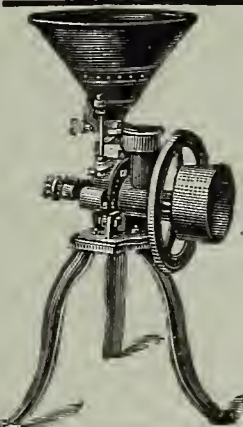


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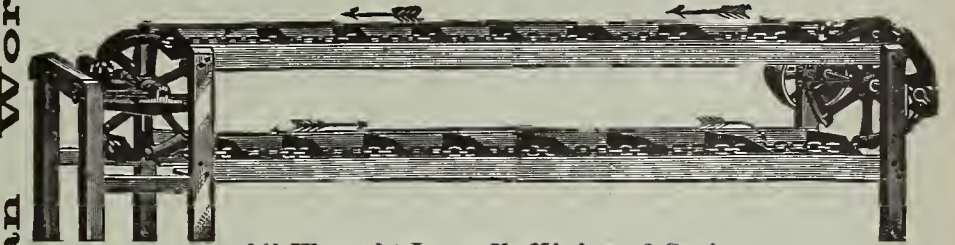
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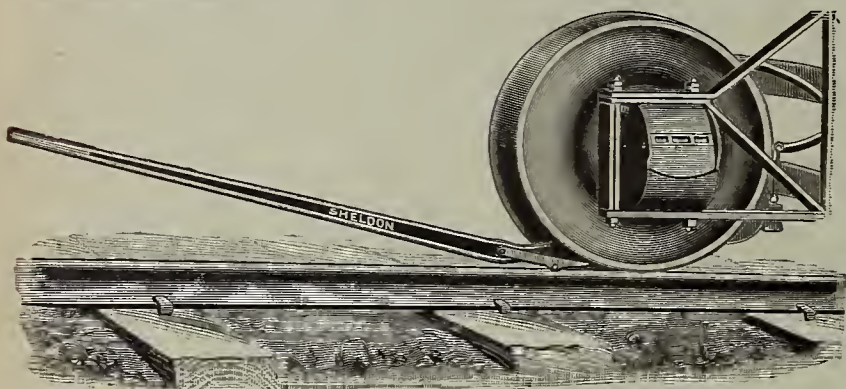
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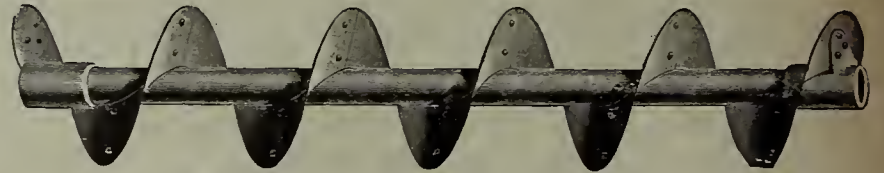
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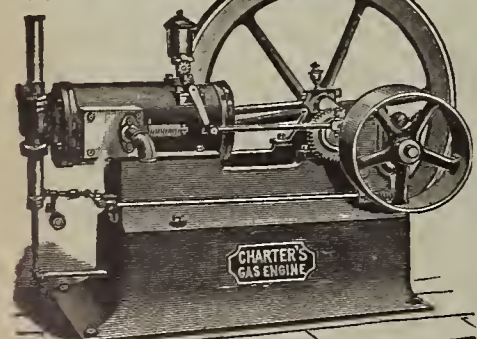
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